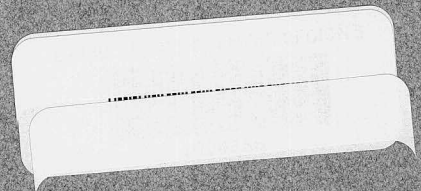


US EPA RECORDS CENTER REGION 5



1004368

Soil Boring Logs for SWMU H



Log of Boring SP01A

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>	
Date Started: <i>9/11/96</i>	Date Completed: <i>9/11/96</i>	Total Depth Drilled (ft.): <i>20</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-20</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP01A

[illegible]

Log of Boring SPO2A

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>	
Date Started: <i>9/11/96</i>	Date Completed: <i>9/11/96</i>	Total Depth Drilled (ft.): <i>16</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-16</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP02A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with a trace of gravel.	CL			
2		95%			Clay brown and orange, mottled, stiff.	CL			
4			0		Slag Gravel black with coarse grained sand, and some clay. Dry.	GC			
6		80%	200		Slag Gravel black and orange. Limonite staining at 5'.	GW			
8			600		Sand dark grey to grey, coarse grained with gravel and some clay. Moist.	SP			
10		0%	200		Slag Gravel black with coarse sand. Saturated.	SP			
12					Clay dark grey, stiff.	CL			
14			1000+		No recovery.				
16		75%			Clay grey, plastic and some interbedded peat. SAMPLE TAKEN	OH			
18					No recovery				
20					End of boring.				

Log of Boring SPO2C

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/11/96</i>	Date Completed: <i>9/11/96</i>	Total Depth Drilled (ft.): <i>20</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-20</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0									
2		100%			Clay brown and orange, mottled, stiff, with some limestone gravel.	CL			
4									
6		60%	100		Sand light brown, fine grained, clay, some silt and slag gravel. Saturated @ 4.5'	SC			
			20		Sand dark grey, fine grained, well sorted, silty, with some roots. Moist.	SM			
					Clay light grey with some sand and gravel.	CL			
					No recovery.				
8			700		Clay dark grey, very plastic with some gravel.	CH			
			800		Slag Gravel black, with coarse grained sand. Saturated.	GM			
10		25%							
12									
14		0%							
16									
18		0%							
20					No recovery 9.5-20' very soft till 19', drove hard 19-20'. Woodplug in last spoon				

Log of Boring SPO2CII

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010


Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/11/96</i>	Date Completed: <i>9/11/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-8	Grout Type: Bentonite chip
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NO WELL INSTALLED

Explanation & Comments



BASF Wyandotte SWMUH

Log of Boring SP02CII

[illegible]

Log of Boring SPO2CIII

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>	
Date Started: <i>9/11/96</i>	Date Completed: <i>9/11/96</i>	Total Depth Drilled (ft.): <i>20</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.5</i>		Ground Elevation (ft.):

Completion Information

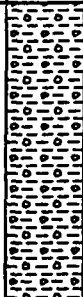




Grout Interval (ft. bgl): <i>0-20</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP02CIII

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0									
2		100%			Clay brown and orange, mottled, stiff, with some limestone gravel.	CL			
4									
6		90%			Sand light brown, fine grained, clay, some silt and slag gravel. Saturated @ 4.5'.	SC			
8					Slag Gravel black. Saturated.	GW			
			/ 400		Peat dark brown.	PT			
			/ 100		Clay grey and plastic.	CL			
10		40%							
12									
14		0%							
16					No recovery. Last foot drove hard- gravel in end of tube.				
18		0%							
20			/ 20						

Log of Boring SP03A

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/12/96</i>	Date Completed: <i>9/12/96</i>	Total Depth Drilled (ft.): <i>20</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-20</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP03A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with gravel.	CL			
2		90%			Cobbles tan, limestones with some clay.	GC			
		100			Sand coarse grained and black slag gravel.	SW			
		100			Sand dark brown, fine grained with some slag gravel.	SW			
4		300			No recovery	SM			
		1000+			Sand dark brown, fine grained. Saturated	PT			
					Peat dark brown to black, fine grained sand, and silt.				
6		25%			No recovery				
8					Sand brown, fine grained with peaty material, compact. Possibly Saturated	SM			
10		10%			No recovery				
12					No recovery				
14		0%			No recovery				
16					Clay dark brown, very plastic, silty. SAMPLE TAKEN	CH			
		700			Clay green-grey and orange, mottled and stiff	CL			
18		90%			No recovery				
20					No recovery				

Log of Boring SPO3AII

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/12/96</i>	Date Completed: <i>9/12/96</i>	Total Depth Drilled (ft.): <i>20</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-20</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP03AII

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with gravel.	CL			
2		90%			Limestone Cobbles tan with some clay.	GW			
		/100			Slag Gravel black with coarse grained sand.	GP			
		/100			Sand dark brown, fine grained with some slag gravel.	SP			
4					No recovery, wet tube tip.				
		/300+			Sand dark brown as above. Saturated.	SP			
		/1000			Peat dark brown to black with fine grained sand and silt. (Very high vapor pressure-chills hand through glove).	PT			
6		25%			No recovery				
8					Sand fine grained with peaty material.	SW			
10		10%			No recovery				
12					No recovery				
14		0%			No recovery				
16					No recovery				
18		90%			Clay dark brown, very plastic, silty. SAMPLE TAKEN	CH			
20					Clay green-grey and orange, mottled. Stiff.	CL			

Log of Boring SP03C

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/12/96</i>	Date Completed: <i>9/12/96</i>	Total Depth Drilled (ft.): <i>20</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-20</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP03C

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0									
2		75%			Clay brown, stiff, with a trace of gravel.	CL			
4					Cobbles limestones with some clay and sand. Wet on end of tube	GC			
4					No recovery	GC			
4					Cobbles limestone as above. Wet.	GC			
6		85%	500		Sand dark grey, fine grained with some gravel	SW			
6			800		Sand black, fine grained with some gravel	SW			
8					No recovery				
8			1000+		Peat black, wood, and fine grained sand. Moist.	PT			
10		50%	700		Clay grey, plastic with woody material	CL			
12					No recovery				
14		0%							
16			70		Clay dark green-brown, plastic	CL			
18		70%	8		Clay green-grey, stiff	CL			
20					No recovery				

Log of Boring SPO4A

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>	
Date Started: <i>9/12/96</i>	Date Completed: <i>9/12/96</i>	Total Depth Drilled (ft.): <i>5</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-5</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP04A

[illegible]

Log of Boring SPO4AII

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>	
Date Started: <i>9/24/96</i>	Date Completed: <i>9/24/96</i>	Total Depth Drilled (ft.): <i>24</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.0</i>		Ground Elevation (ft.):

Completion Information



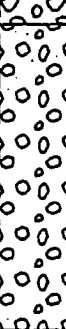



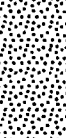
Grout Interval (ft. bgl): <i>0-24</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP04AII

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Topsoil with grass, gravel, clay, and fill. Moist to wet.	CL			
2					Gravel & Fill moist to wet.	GW			
4					Gravel black with coarse sand. Saturated.	GW			
6									
8					Clay silty with greyish black sand. Wet.	CL			
10									
12					No recovery.				
14									
16					Gravel black with coarse grained sand. Saturated.	GW			
18					Silt grey, sandy, fine grained. Wet.	MH			
20					Sand grey, fine grained. Saturated.	SW			

Log of Boring SPO4D

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/13/96</i>	Date Completed: <i>9/13/96</i>	Total Depth Drilled (ft.): <i>25</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-25</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP04D

[illegible]

BASF Wyandotte SWMUH

Log of Boring SP04D

[illegible]

Log of Boring SPO4DII

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/24/96</i>	Date Completed: <i>9/24/96</i>	Total Depth Drilled (ft.): <i>20</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-20</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP04DII

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Topsoil with grass.	CL			
2					Clay brown and orange mottled, medium stiffness with trace coarse grained sand and some peat. Moist.	CL			
4					Sand grey, silty with fill, trace brick, and gravel. Saturated @ 3'.	SM			
6					DBO greyish white. Wet.	CL			
8					Sand black, silty with gravel fill. Saturated.	SM			
10					No recovery.				
12									
14									
16									
18					Silt greyish-brown, peaty with trace fine grained sand and soft. Grades to greyish-brown silt. Moist to wet.	OL			
20					Sand grey, fine to medium grained. Saturated.	SW			

Log of Boring SP05A

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/12/96</i>	Date Completed: <i>9/12/96</i>	Total Depth Drilled (ft.): <i>4.2</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4.2</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

Log of Boring SPO5B

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/12/96</i>	Date Completed: <i>9/12/96</i>	Total Depth Drilled (ft.): <i>5</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.1</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-5</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP05B

[illegible]

Log of Boring SP05C

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (In.): <i>2"</i>
Date Started: <i>9/12/96</i>	Date Completed: <i>9/12/96</i>	Total Depth Drilled (ft.): <i>20</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-20</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP05C

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with some slag gravel.	CL			
2		90%			Clay dark brown, with some gravel.	CL			
4			100		Sand dark brown and white, fine grained, with some limestone cobbles, and clay	SC			
6		50%			No recovery				
8			700		Slag Gravel black, fine grained sand and clay. Moist	GC			
10		0%			No recovery. Very soft.				
12					No recovery				
14		0%							
16			700		Sludge grey, very plastic.				
18		90%	1000		Cedar Peat	PT			
20			700		Sand orange and brown, fine grained, well sorted, silty. Compact. (Saturated)	SM			
					No recovery				

BASF Wyandotte SWMUH

Log of Boring SP08A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with some gravel.	CL			
2		100%	0		Slag Gravel black, with some sand.	GP			
4			20		Clay white to light grey with some sand.	CL			
6		80%	100		Slag Gravel black to green-brown, with some fine grained sand and silt. Moist on tip of spoon.	GP			
8			100		Slag Gravel black, with coarse sand. Saturated.	GP			
10		60%	400		Silt light and dark brown with fine grained sand and organic material. Dry.	SM			
12			700		No recovery.	OL			
14		25%	1000+		Clay green-grey & black with silt and organic material.	PT			
16			100		Peat dark red-brown.	PT			
18		60%			Clay green-grey, with orange mottling.	CL			
20					No recovery				
22					Clay dark brown, very plastic.	CH			
24					Sand green-brown, fine grained, well sorted silty. Saturated.	SM			
26					No recovery.				
28					Sand as above, saturated.	SM			
30					Sand light grey, fine grained, well sorted, silty. Saturated.	SM			
32					No recovery.				

Log of Boring SPO6B

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010



Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/13/96</i>	Date Completed: <i>9/13/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with some cobbles.	CL			
2		60%	1		Slag Gravel dark grey & tan, with some fine grained sand, clay.	GC			
4					No recovery. Refusal @ 3'. (Concrete).				
					End of boring				

Log of Boring SP06C

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/13/96</i>	Date Completed: <i>9/13/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP08C

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with some gravel.	CL			
2		90%	10		Slag Gravel black, with fine grained sand & silt, clay. Laminated	GC			
4					No recovery. End of Boring				

Log of Boring SP06D

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/13/96</i>	Date Completed: <i>9/13/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP08D

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with some slag and coal fragments.	CL			
2		60%	0		Slag Gravel dark brown, with some coal, gravel and fine grained sand and clay.	GC			
4					No recovery. Refusal due to concrete.				
6									
8									
10									
12									
14									
16									
18									
20					End of Boring				

Log of Boring SPO6E

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/13/96</i>	Date Completed: <i>9/13/96</i>	Total Depth Drilled (ft.): <i>20</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.5</i>		Ground Elevation (ft.):

Completion Information















Grout Interval (ft. bgl): <i>0-20</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP06E

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with some gravel.	CL			
2		90%			Slag Gravel dark brown, with some coarse grained sand & some clay	GC			
			10		DBO white with some coarse grained sand.	CL			
					Slag Gravel dark grey with some sand and clay.	GC			
4					No recovery, moist at tip of barrel.				
					DBO tan, sandy.	CL			
6		75%	200		Slag Gravel black, saturated.	GW			
			100		Clay green-grey silty.	CL			
8					No recovery.				
10		0%							
12					Clay green-grey, plastic.	CH			
14		60%	1000+		Peat brown.	PT			
					Clay green-grey, plastic.	CH			
					Sand green-brown, fine grained, well sorted. Saturated.	SM			
16					No recovery.				
			800		Clay green-grey, plastic. SAMPLE TAKEN.	CH			
			400		Sand orange-brown, fine grained, well sorted, silty. Saturated.	SM			
18		75%	400		Sand grey, fine grained, well sorted, silty. Saturated.	SM			
20					No recovery.				

Log of Boring SP07A

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>	
Date Started: <i>9/10/96</i>	Date Completed: <i>9/10/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP07A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay dark brown, with coarse slag sand, trace of roots.	SC			
					Slag Gravel dark brown with coarse sand and some clay.	GC			
2		50%	400		Slag Gravel as above. Limonite staining.	GC			
					Slag Gravel black with some clay. Moist.	GC			
					No recovery.				
4					Slag Gravel black with some clay, (possibly stuff). Saturated.	GC			
6		20%			No recovery.				
8			400		Slag Gravel black with some clay, (possibly stuff). Oily sheen, saturated.	GC			
10		70%	400		Sand grey-brown, fine grained, well sorted silty, compact. (Saturated?). SAMPLE TAKEN.	SM			
12					No recovery.				
14					End of boring.				

Log of Boring SP07C

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/10/96</i>	Date Completed: <i>9/10/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP07C

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay dark brown, sandy with some limestone gravel.	CL			
2		40%			Sand light brown, medium grained, medium sorted. Moist.	SW			
4					No recovery.				
6		25%			Slag Gravel black, oily sheen. Saturated.	GW			
8					No recovery.				
10		40%			Slag Gravel black. (possibly stuff)	GW			
12					Sand grey-brown, fine grained, well sorted silty with a trace of roots. Saturated.	SM			
14					No recovery.				
16					End of boring.				

Log of Boring SP08A

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/10/96</i>	Date Completed: <i>9/10/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP08A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with some slag gravel.	CL			
					Clay light brown with silt.	CL			
					Cedar peat.	PT			
-2		90%			Clay light brown with silt, some sand and gravel.	CL			
			2		Slag Gravel black.	GW			
					Clay light brown, sand with some gravel. Moist.	CL			
-4					No recovery.				
			100		Slag Gravel black with sand. Saturated.	GP			
-6		25%			No recovery.				
-8					Slag Gravel black (possibly stuff)	GW			
-10		20%	1000+		Sand grey-brown, fine grained, well sorted silty. Saturated. Heavy sheen on water.	SM			
-12					No recovery.				
-14					End of boring.				

Log of Boring SP08B

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>	
Date Started: <i>9/10/96</i>	Date Completed: <i>9/10/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.2</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP08B

[illegible]

Log of Boring SP09A

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>		Borehole Diameter (In.): <i>2"</i>
Date Started: <i>9/10/96</i>	Date Completed: <i>9/10/96</i>	Total Depth Drilled (ft.): <i>16</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-16</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP08A

[illegible]

Log of Boring SPO9C

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: BASF		
Drilling Company: Environmental Science and Engineering, Inc.		
Drilling Rig: Keck (TM) Soil Punch	Drilling Method: Hydraulic Hammer	
Soil Sampling Device: 4' Lined 2" Steel Sampler	Borehole Diameter (in.): 2"	
Date Started: 9/10/96	Date Completed: 9/10/96	Total Depth Drilled (ft.): 12
Apparent Depth to Saturation While Drilling (ft. bgl): 5.5	Ground Elevation (ft.):	

Completion Information

Grout Interval (ft. bgl): 0-12	Grout Type: Bentonite chip
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP08C

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay orange-brown, mottled, roots @ top.	CL			
2		60%			Clay tan and dark brown cobbles and coarse sand.	CL			
4			400		Slag Gravel black, oily. Moist @ 3'. No recovery	GW			
6		50%	200		Slag Gravel black as above. Sand dark brown, fine grained, well sorted, silty. Compact.	GW SM	 		
8					No recovery. (1' stuff)				
10		50%							
12			60 200		Clay dark grey-green with roots. Plastic. Sand brown, fine grained, well sorted, silty. Compact. End of boring.	CH SM	 		

Log of Boring SP10A

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>	
Date Started: <i>9/9/96</i>	Date Completed: <i>9/9/96</i>	Total Depth Drilled (ft.): <i>16</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>2.2</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-16</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP10A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with some coarse sand and gravel. Trace roots. Compact.	CL			
2		60%	0/0		Clay brown and orange, mottled.	CL			
					Limestone Cobbles wet in tube end.	GW			
					No recovery				
4			148/600		Clay brown, mixed with black slag gravel.	CL			
6		5%							
8									
10		0%			No recovery				
12									
14		50%							
16			186/1000+		Sediment black sloppy with some slag gravel.	CH			
			108/1000+		Sand grey-brown, fine grained, well sorted, silty. Saturated.	SW			
					End of boring.				

Log of Boring SP10B

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/9/96</i>	Date Completed: <i>9/9/96</i>	Total Depth Drilled (ft.): <i>16</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>2</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-16</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP10B

[illegible]

Log of Boring SP10C

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (In.): <i>2"</i>
Date Started: <i>9/9/96</i>	Date Completed: <i>9/9/96</i>	Total Depth Drilled (ft.): <i>16</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-16</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring SP10C

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with some slag gravel. Compact.	CL			
2		30%			Limestone Cobbled white.	GW			
4					No recovery.				
6		50%	51/ 900		Clay brown-grey and orange, mottled. Very plastic.	CH			
8			87/ 1000+		Slag Gravel black, some coarse grained sand. Saturated. Oily sheen. SAMPLE TAKEN.	GP			
10		75%	282/ 1000+		No recovery.				
12					Slag Gravel Saturated. (Possible sluff)	GW			
14					Black Coaly Material	PT			
16					Clay green-grey, plastic.	CH			
18					No recovery.				
20		20%	3/ 50		Clay green-brown, plastic	CH			
22					Sand grey-brown, fine grained, well sorted, silty.	SM			
24					No recovery.				
26					End of boring.				

Log of Boring TPO1

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/29/96</i>	Date Completed: <i>8/29/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring TP01

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay light brown with fine grained sand, silt, and some gravel.	CL			
2		95%	0.0		Clay dark grey to black, sandy with limestone cobbles.	CL			
4					Clay grey with sand and some gravel.	CL			
4			4.5		Gravel black with slag, some clay, and silt. Saturated @ 3.5'.	GP			
6		25%			No recovery.				
8			260		Gravel black as above with an oily sheen. Saturated.	GP			
8					Clay grey, (pure) plastic.	CH			
10		50%			Sand light grey-brown, fine grained, well sorted, silty. Saturated.	SM			
12					No recovery.				
12					End of Boring				

Log of Boring TP02

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/29/96</i>	Date Completed: <i>8/29/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>2.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-12	Grout Type: Bentonite chip
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NO WELL INSTALLED

Explanation & Comments

[illegible]

BASF Wyandotte SWMUH

Log of Boring TP02

[illegible]

Log of Boring TP03

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/29/96</i>	Date Completed: <i>8/29/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring TP03

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay light brown with fine grained sand, silt, and some gravel.	CL			
2		90%			Clay dark grey to black, sandy with limestone cobbles.	CL			
4					Clay grey with sand and some gravel.	CL			
6		50%			Gravel black with slag, some clay, and silt. Saturated @ 3.5'.	GP			
8					No recovery.				
10		25%			Gravel black as above with an oily sheen. Saturated.	GP			
					Fill grey, (pure) plastic. Clay liner @ 8.5'.	CH			
					Gravel black with slag, some clay, and silt. Saturated.	GP			
					No recovery.				
					End of Boring.				

Log of Boring TPO4

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>	
Date Started: <i>8/29/96</i>	Date Completed: <i>8/29/96</i>	Total Depth Drilled (ft.): <i>16</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-16</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring TP04

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Sand light brown, fine grained, silty with clay and roots.	SM			
2		85%			Clay brown with some gravel, trace sand, and organic material.	CL			
4					DBO tan with sand.	CL	x x x x		
					Sand tan to light brown, indurated.	SW	x x x x		
					No recovery.		x x x x		
6		90%					x x x x		
8					DBO white. Plastic @ 6.5'.	CL	x x x x		
10		95%					x x x x		
12			0.0/200				x x x x		
			0.0/300		Clay black to dark brown.	CL			
14		25%			No recovery.				
16					End of Boring.				

Log of Boring TPO5

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/3/96</i>	Date Completed: <i>9/3/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>2.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring TP05

[illegible]

Log of Boring TPO6

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>	
Date Started: <i>9/4/96</i>	Date Completed: <i>9/4/96</i>	Total Depth Drilled (ft.): <i>16</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>2.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-16</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring TP08

[illegible]

Log of Boring TSP05

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/30/96</i>	Date Completed: <i>8/30/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring TSP05

[illegible]

Ground Elevation (ft.):

Grout Type: Bentonite chip

Explanation & Comments

BASF Wyandotte SWMUH					Log of Boring TSP08				
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0									
2		25%	>1		Clay brown, dry, some sand, trace to some limestone gravel, unconsolidated.				
4									
6		50%	0		Sand brown, fine to medium grained.	SW			
8			2		Gravel black with slight odor, and trace coal. Refusal @ 7' (rock in nose of punch).	GW			
					No recovery.				
					End of Boring.				
				</					

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: *BASF*

Drilling Company: *Environmental Science and Engineering, Inc.*

Drilling Rig: *Keck (TM) Soil Punch*

Drilling Method: *Hydraulic Hammer*

Soil Sampling Device: 4' Lined 2"

Steel Sampler

Borehole Diameter (in.): 2"

Date Started: 8/30/96

Date Completed: 8/30/96

Total Depth Drilled (ft.): 12

Apparent Depth to Saturation While Drilling (ft. bgl): 4.5

Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-12

Grout Type: Bentonite chip

NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring TSP07

[illegible]

Log of Boring TSP08

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/30/96</i>	Date Completed: <i>8/30/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring TSP08

[illegible]

Log of Boring TSP09

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/30/96</i>	Date Completed: <i>8/30/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring TSP10

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined 2"</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/30/96</i>	Date Completed: <i>8/30/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring TSP10

[illegible]

Log of Boring TSP11

BASF Wyandotte SWMUH
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined 2" Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>	
Date Started: <i>8/30/96</i>	Date Completed: <i>8/30/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.8</i>		Ground Elevation (ft.):

Completion Information






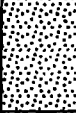



Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte SWMUH

Log of Boring TSP11

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Industrial Fill trace brick, and gravel.	GW			
2		100%	0		Sand blueish grey, fine grained, silty with clay.	SM			
			>1000		DBO greyish white with trace gravel.	CL			
4			>1000		DBO turns black and has more gravel. Grades to gravel. Saturated.	CL			
6		100%			Gravel black, medium grained with some sand. Saturated.	GW			
			0/200		Sand pinkish-grey, medium grained, and hard pack. Moist. Not saturated as above.	SW			
8					Sand black.	SW			
10		60%			Sand greyish-brown, fine-medium grained, silty with some greenish-grey clay. Wet.	SM			
12					Sand silty with lots of peat. Wet.	SM			
					End of Boring.				

Soil Boring Logs for AOC 2

Log of Boring SBO1

BASF Wyandotte AOC2 Grain Size Analysis

1609 Biddle, Wyandotte, Michigan

Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>2' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2</i>
Date Started: <i>8/20/96</i>	Date Completed: <i>8/20/96</i>	Total Depth Drilled (ft.): <i>6</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-6</i>	Grout Type: <i>Bentonite Chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

1609 Biddle, Wyandotte, Michigan

Client: BASF

Drilling Company: *Environmental Science and Engineering, Inc.*

Drilling Rig: *Keck (TM) Soil Punch*

Drilling Method: *Hydraulic Hammer*

Soil Sampling Device: 2' Lined

Steel Sampler

Borehole Diameter (in.): 2

Date Started: 8/20/96

Date Completed: 8/20/96

Total Depth Drilled (ft.): 6

Apparent Depth to Saturation While Drilling (ft. bgl): 4.5

Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-6

Grout Type: Bentonite Chips

NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC2 Grain Size Analysis

Log of Boring SB02

[illegible]

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>2' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2</i>
Date Started: <i>8/20/96</i>	Date Completed: <i>8/20/96</i>	Total Depth Drilled (ft.): <i>10</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>9</i>		Ground Elevation (ft.):

Grout Interval (ft. bgl): 0-10	Grout Type: Bentonite Chips
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NO WELL INSTALLED

Explanation & Comments

This image shows a completely blank white rectangular area enclosed within a thin black border. There are no markings, text, or illustrations present on the page.

BASF Wyandotte AOC2 Grain Size Analysis						Log of Boring SB03	
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log
			Values	Profile			
0					Topsol	CL	
			0.0/ 0.0		Fill with sand, gravel, cinders, ash, and brick. Dry.		
-2			0.0/ 0.0				
-4			0.0/ 0.0		Fill clay, sand, gravel, cinder, brick and ash. Moist.		
-6			0.0/ 0.0				
-8			0.0/ 0.0				
-10			0.0/ 0.0		Fill same as above. Saturated @ 9'.		
-12					End of Boring		
-14							
-16							
-18							
-20							

Client: <i>BASF</i>	
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>	
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>2' Lined Steel Sampler</i>	Borehole Diameter (in.): <i>2</i>
Date Started: <i>8/20/96</i> Date Completed: <i>8/20/96</i>	Total Depth Drilled (ft.): <i>6</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6</i>	Ground Elevation (ft.):

Grout Interval (ft. bgl): 0-6	Grout Type: Bentonite Chips
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NO WELL INSTALLED

Explanation & Comments

1

BASF Wyandotte, AOC2 Grain Size Analysis

Log of Boring SB04

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Topsol	CL	[Pattern]		
0.0/ 0.0					Fill with sand, limestone gravel, brick, cinder, and ash. Dry.		[Pattern]		
0.0/ 0.0					DBO yellow-white. Moist.	CL	[Pattern]		
					DBO white. Saturated @ 6'.	CL	[Pattern]		
					End of Boring				

BASF Wyandotte AOC2 Grain Size Analysis

Log of Boring SB05

[illegible]

Client: <i>BASF</i>	
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>	
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>2' Lined Steel Sampler</i>	Borehole Diameter (in.): <i>2</i>
Date Started: <i>8/21/96</i>	Date Completed: <i>8/21/96</i>
Total Depth Drilled (ft.): <i>2.5</i>	
Apparent Depth to Saturation While Drilling (ft. bgl): <i>2.0</i>	Ground Elevation (ft.):

Grout Interval (ft. bgl): 0-2.5	Grout Type: Bentonite Chips
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NO WELL INSTALLED

Explanation & Comments

[illegible]

BASF Wyandotte AOC2 Grain Size Analysis

Log of Boring SB07

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Gravel	GW			
0.0/0.0					Fill with clay, sand, DBO, gravel, and brick.				
0.0/0.0									
0.0/0.0					Fill same as above with little cinder and ash. Saturated @ 5.5'.				
					End of Boring				

1609 Biddle, Wyandotte, Michigan

Client: BASF

Drilling Company: *Environmental Science and Engineering, Inc.*

Drilling Rig: *Keck (TM) Soil Punch*

Drilling Method: *Hydraulic Hammer*

Soil Sampling Device: 2' Lined

Steel Sampler

Borehole Diameter (in.): 2

Date Started: 8/21/96

Date Completed: 8/21/96

Total Depth Drilled (ft.): 4

Apparent Depth to Saturation While Drilling (ft. bgl): 2

Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-4

Grout Type: Bentonite Chips

NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC2 Grain Size Analysis

Log of Boring SB08

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Gravel	GM			
2			0.0/ 0.0		FM with clay, sand, gravel, little cinder, ash, and brick. Saturated @ 2'.				
4					FM same as above with more gravel.				
6									
10									
12									
14									
16									
18									
20					End of Boring				

Soil Boring Logs for AOC 4

Log of Boring SPO1

BASF Wyandotte AOC4 Grain Size Analysis

1609 Biddle, Wyandotte, Michigan

Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/16/96</i>	Date Completed: <i>8/16/96</i>	Total Depth Drilled (ft.): <i>16</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>8.5</i>		Ground Elevation (ft.):

Completion Information







Grout Interval (ft. bgl): <i>0-16</i>	Grout Type: <i>Bentonite Chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC4 Grain Size Analysis

Log of Boring SP01

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0			0.0/0.0		Clay dark grey-brown with gravel and sand.	CL			
2		50%	21/50		Tar black, sandy.	PT			
4					No recovery.				
6		60%	73/110		Tar black with some sand.	PT			
8					Tar black with sand and some gravel.	PT			
10		50%	13.8/20		Sand light brown, fine grained, well sorted with roots. (1" brown clay on top of sand). Saturated, water rises in hole immediately on penetration.	SW			
12					No recovery.				
14		95%	0.0/280		Sand light brown as above.	SW			
16					End of Boring				

Log of Boring SP01-1

BASF Wyandotte AOC4 Grain Size Analysis

1609 Biddle, Wyandotte, Michigan

Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/20/96</i>	Date Completed: <i>8/20/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite Chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC4 Grain Size Analysis

Log of Boring SP01-1

[illegible]

BASF Wyandotte AOC4 Grain Size Analysis

Log of Boring SP02

[illegible]

1609 Biddle, Wyandotte, Michigan

Client: BASF

Drilling Company: *Environmental Science and Engineering, Inc.*

Drilling Rig: *Keck (TM) Soil Punch*

Drilling Method: *Hydraulic Hammer*

Soil Sampling Device: 4' Lined

Steel Sampler

Borehole Diameter (in.): 2"

Date Started: 8/16/96

Date Completed: 8/16/96

Total Depth Drilled (ft.): 16

Apparent Depth to Saturation While Drilling (ft. bgl):

Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-16

Grout Type: Bentonite Chips

NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC4 Grain Size Analysis						Log of Boring SP03			
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay dark brown with gravel and some sand.	CL			
2		50%	143/160 138/130		Tar black with sand and gravel.	PT			
					Clay brown with coarse grained sand. Moist.	CL			
					No recovery.				
4			203/200		Tar black.	PT			
6		50%	18/120		Gravel black, larry with sand and gravel.	GW			
					No recovery.				
8			1.2/11		Gravel black as above.	GW			
					Sand brown, fine grained, well sorted, and silty.	SM			
10		30%			No recovery.				
12			0.0/20		Sand brown, fine grained, well sorted, silty with roots as above.	SM			
14		5%			No recovery.				
16					End of Boring				
18									
20									

Log of Boring SPO3-1

BASF Wyandotte AOC4 Grain Size Analysis

1609 Biddle, Wyandotte, Michigan

Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/20/96</i>	Date Completed: <i>8/20/96</i>	Total Depth Drilled (ft.): <i>16</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-16</i>	Grout Type: <i>Bentonite Chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SPO4

BASF Wyandotte AOC4 Grain Size Analysis

1609 Biddle, Wyandotte, Michigan

Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/16/96</i>	Date Completed: <i>8/16/96</i>	Total Depth Drilled (ft.): <i>16</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-16</i>	Grout Type: <i>Bentonite Chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC4 Grain Size Analysis

Log of Boring SP04

[illegible]

[illegible]

BASF Wyandotte AOC4 Grain Size Analysis

Log of Boring SP08

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0									
2		50%	0/0		Gravel Fill underlain by coke & coal fines.	GW			
6			0/0		Coke & Coal Fill mixed with gravel. Water @ 6'.	PT			
8					Peat	PT			
10			0/0		Sand brown-greyish brown, fine grained, no odor, and silty. Saturated.	SM			
12					End of Boring				

1609 Biddle, Wyandotte, Michigan

Client: BASF

Drilling Company: *Environmental Science and Engineering, Inc.*

Drilling Rig: *Keck (TM) Soil Punch*

Drilling Method: *Hydraulic Hammer*

Soil Sampling Device: 4' Lined

Steel Sampler

Borehole Diameter (in.): 2"

Date Started: 8/19/96

Date Completed: 8/19/96

Total Depth Drilled (ft.): 12

Apparent Depth to Saturation While Drilling (ft. bgl): 4.5

Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-12

Grout Type: Bentonite Chips

NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC4 Grain Size Analysis

Log of Boring SP07

[illegible]

[illegible]

1609 Biddle, Wyandotte, Michigan

Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/19/96</i>	Date Completed: <i>8/19/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.5</i>		Ground Elevation (ft.):

Grout Interval (ft. bgl): 0-12	Grout Type: Bentonite Chips
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NO WELL INSTALLED

Explanation & Comments

[illegible]

[illegible]

1609 Biddle, Wyandotte, Michigan

Client: BASF

Drilling Company: *Environmental Science and Engineering, Inc.*

Drilling Rig: *Keck (TM) Soil Punch*

Drilling Method: *Hydraulic Hammer*

Soil Sampling Device: 4' Lined

Steel Sampler

Borehole Diameter (in.): 2"

Date Started: 8/19/96

Date Completed: 8/19/96

Total Depth Drilled (ft.): 12

Apparent Depth to Saturation While Drilling (ft. bgl): 5

Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-12

Grout Type: Bentonite Chips

NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC4 Grain Size Analysis

Log of Boring SP10

[illegible]

1609 Biddle, Wyandotte, Michigan

Client: BASF

Drilling Company: *Environmental Science and Engineering, Inc.*

Drilling Rig: *Keck (TM) Soil Punch*

Drilling Method: *Hydraulic Hammer*

Soll Sampling Device: 4' Lined

Steel Sampler

Borehole Diameter (in.): 2"

Date Started: 8/19/96

Date Completed: 8/19/96

Total Depth Drilled (ft.): 8

Apparent Depth to Saturation While Drilling (ft. bgl): 4

Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-8

Grout Type: Bentonite Chips

NO WELL INSTALLED

Explanation & Comments

[illegible]

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/19/96</i>	Date Completed: <i>8/19/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-12	Grout Type: Bentonite Chips
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NO WELL INSTALLED

Explanation & Comments

1

Log of Boring SP13

BASF Wyandotte AOC4 Grain Size Analysis

1609 Biddle, Wyandotte, Michigan

Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/19/96</i>	Date Completed: <i>8/19/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite Chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC4 Grain Size Analysis

Log of Boring SP13

[illegible]

[illegible]

Log of Boring SP14-1

BASF Wyandotte AOC4 Grain Size Analysis
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/20/96</i>	Date Completed: <i>8/20/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite Chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SG-003-AOC4-1

BASF

Wyandotte, Michigan

Project Number: 4695-010

Client: <i>BASF</i>	
Drilling Company: <i>Environmental Science & Engineering, Inc.</i>	
Drilling Rig:	Drilling Method: <i>GeoProbe</i>
Soil Sampling Device: <i>4 inch acetate Liner/Shovel</i>	Borehole Diameter (in.): <i>2</i>
Date Started: <i>8/20/96</i>	Date Completed: <i>8/20/99</i>
Total Depth Drilled (ft.): <i>8</i>	
Apparent Depth to Saturation While Drilling (ft. bgl): <i>7</i>	Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl):	Grout Type:
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NO WELL INSTALLED

Explanation & Comments






This boring was installed to collect samples for chemical and physical analysis. The following analysis was performed on the tar only:

LAB:	ANALYTE:
TEC	moisture, compaction, strength
RTI	BTU value
Quanterra	VOC, semivolatiles, cyanide, metals

Location: 15' directly south of AOC4-SP03

BASF

Log of Boring SG-003-A0C4-1

Depth (feet bgl)	Soil/Rock Description	USCS Classification	Lithologic Log	Borehole Completion	Comments	Elevation (ft.)
0	FI					
2						
4	Tar Only					
6						
8	FI c/c black slag, saturated at 7.0'					
10	End of Boring					

Log of Boring SG-003-AOC4-2

BASFWyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>	
Drilling Company: <i>Environmental Science & Engineering, Inc.</i>	
Drilling Rig: <i>Keck Soil Punch</i>	Drilling Method: <i>GeoProbe</i>
Soil Sampling Device: <i>4 inch acetate Liner/Shovel</i>	Borehole Diameter (in.): <i>2</i>
Date Started: <i>8/20/96</i>	Date Completed: <i>8/20/99</i>
Total Depth Drilled (ft.): <i>4</i>	
Apparent Depth to Saturation While Drilling (ft. bgl):	Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl):	Grout Type:
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NO WELL INSTALLED

Explanation & Comments


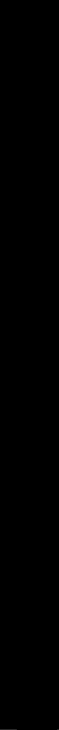
This boring was installed to collect samples for chemical and physical analysis. The following analysis was performed on the tar only:

LAB:	ANALYTE:
TEC	moisture, compaction, strength
RTI	BTU value
Quanterra	VOC, semivolatiles, cyanide, metals

Location: 28' west of SG-003-AOC4-01

BASF

Log of Boring SG-003-AOC4-2

Depth (feet bgl)	Soil/Rock Description	USCS Classification	Lithologic Log	Borehole Completion	Comments	Elevation (ft.)
0	FM gravel, some tar					
2	Tar					
4	End of Boring					
6						

Soil Boring Logs for AOC 6

Log of Boring SBO1

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>	
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>	
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/16/96</i>	Date Completed: <i>7/16/96</i>
Total Depth Drilled (ft.): <i>12</i>	
Apparent Depth to Saturation While Drilling (ft. bgl): <i>2</i>	Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite pellet</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Top Soil black, organic, and slag.	CL	[Pattern]		
2		50%			Industrial Fill cohesive. Saturated.	GW	[Pattern]		
6		60%			Sand brick color, with gravel, trace coal & slag. Saturated.	SW	[Pattern]		
8									
10		100%			D80 Saturated.	CL	[Pattern]		
12					End of Boring				

Log of Boring SB01A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

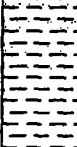





Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/16/96</i>	Date Completed: <i>7/16/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite pellet</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0									
40					Top Soil black, slag, with orange brown fibrous material	CL			
200		80%			DBO white. Moist.	CL			
0.0					Gravel coarse grained. Saturated.	GW			
100%					Sand coarse grained with fine gravel	SW			
0.0					DBO white. Moist.	CL			
100%					Gravel fine with coarse grained sand. Trace asphalt fill material	GW			
					End of Boring				

BASF Wyandotte AOC6

Log of Boring SB01B

[illegible]

Log of Boring SBO1C

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (In.): <i>2"</i>
Date Started: <i>7/16/96</i>	Date Completed: <i>7/16/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>2.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite pellet</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SB01C

[illegible]

Log of Boring SB01D

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/16/96</i>	Date Completed: <i>7/16/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>2</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite pellet</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SB01D

[illegible]

Log of Boring SPO2

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (In.): <i>2"</i>
Date Started: <i>7/17/96</i>	Date Completed: <i>7/17/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>2.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Hydrated Bentonite</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP02

[illegible]

Log of Boring SP03

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/17/96</i>	Date Completed: <i>7/17/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Hydrated Bentonite</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP03

[illegible]

Log of Boring SPO4

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>	
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>	
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Stainless Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/17/96</i>	Date Completed: <i>7/17/96</i>
Total Depth Drilled (ft.): <i>11</i>	
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>	Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-11</i>	Grout Type: <i>Hydrated Bentonite</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6					Log of Boring SP04				
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Sand & Gravel brown-reddish, grass surface, iron staining with fines.	SP			
2		90%	75		Fill black, appears to be like topsoil. Moist and compactable.	CL			
4									
6		90%	20		Silt mottled grey and black with fine sand, moist to wet. Grades to grey. Saturated, very soft.	MH			
8					DBO white, medium to coarse grained. Wet.	CL			
10		100%			Gravel dark grey, fine to coarse grained. Saturated.	GW			
12					DBO same as above.	CL			
14					End of Boring				
16									
18									
20									

Log of Boring SPO4-1

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/18/96</i>	Date Completed: <i>7/18/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP04-1

[illegible]

Log of Boring SP04A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (In.): <i>2"</i>
Date Started: <i>7/17/96</i>	Date Completed: <i>7/17/96</i>	Total Depth Drilled (ft.): <i>11</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information





Grout Interval (ft. bgl): <i>0-11</i>	Grout Type: <i>Hydrated Bentonite</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP04A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0									
20					Fill Sand & Gravel black-reddish, grass surface, unconsolidated, trace brick with iron staining.	SP			
70	90%				Topsol black, fine grained. Moist.	CL			
>200									
120	90%				Silt grey-black, mottled, wet, swampy odor, grades to black color very soft with tar-like appearance.	OL			
200									
80%					DBO whitish grey.	CL			
					End of Boring				

Log of Boring SPO4B

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/8/96</i>	Date Completed: <i>8/8/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information


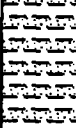

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP04B

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, silt, and gravel.	CL			
2		90%			Clay grey and brown, mottled, with sand, silt, and occasional DBO fragments.	CL			
4			113		Coke black coaly.	PT			
					End of Boring				

Log of Boring SPO4C

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/8/96</i>	Date Completed: <i>8/8/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SPO4C

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/8/96</i>	Date Completed: <i>8/8/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SPO4D

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/8/96</i>	Date Completed: <i>8/8/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP04D

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, silt, and gravel.	CL			
2		90%	0		Clay brown-grey with sand, occasional gravel, and coal fragment.	CL			
4					No recovery.				
6		80%	184		Coal black, medium grained, size aggregate. Saturated @ 5'.	PT			
8			23		Sand brown, fine grained with silt, Laminated. Saturated.	SM			
8					End of Boring				

Log of Boring SPO4E

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/8/96</i>	Date Completed: <i>8/8/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6					Log of Boring SP04E				
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, gravel, and silt.	CL			
2		70%	0		Clay brown with sand, coal, and DBO fragments.	CL			
4					No recovery.				
6		50%	49		Sand yellow-brown, medium grained. Saturated.	SP			
8			181.8		Coal black, medium grained. Saturated.	PT			
8			7816		Cedar red. Moist.	PT			
					End of Boring				

Log of Boring SPO4F

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (In.): <i>2"</i>
Date Started: <i>8/8/96</i>	Date Completed: <i>8/8/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP04F

[illegible]

Log of Boring SP05

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/18/96</i>	Date Completed: <i>7/18/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SPO5-1

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/18/96</i>	Date Completed: <i>7/18/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP05-1

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Industrial Fill gravel and sand, trace slag, brick, loose, unconsolidated with iron staining. Moist.	GP			
2		70%			Cinder Ash black. Moist.	PT			
4		>400			Sand grey-black silt-like, mottled. Grades to dark grey fine sand and silt. Saturated @ approximately 3.5'.	SM			
6		>200			Silt black with fine sand-like material, may be tank bottom sludge.	ML			
8		100%			Silt dark grey, same as above. Saturated.	ML			
10		80%							
12					End of Boring				

Log of Boring SP05-2

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/18/96</i>	Date Completed: <i>7/18/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP05-2

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Industrial Fill gravel and sand, trace slag, brick, loose, unconsolidated with iron staining. Moist.	GP			
2		60% > 1000			Cinder Ash black, moist.	PT			
4					Sand grey-black, silt-like, mottled. Grades to dark grey fine sand and sil. Saturated @ approximately 3.5.	SM			
6		50% > 1000							
8					Silt black with fine sand like material, may be tank bottom sludge.	ML			
10		90% > 1000							
12					End of Boring				
14									
16									
18									
20									

Log of Boring SPO5-3

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/18/96</i>	Date Completed: <i>7/18/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SPO5-4

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/19/96</i>	Date Completed: <i>7/19/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP05-5

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

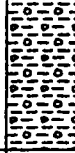

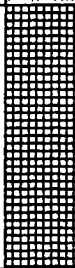
Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/19/96</i>	Date Completed: <i>7/19/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>2.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-12	Grout Type: Bentonite chips
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6				Log of Boring SP05-5					
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Topsoil black with coarse gravel and brick. Saturated @ 2'.	CL			
2		75%	5.2		Silt with some clay and coarse grained sand.	ML			
4			135		Fine grained material black, possibly column bottoms. Saturated.	PT			
6		50%			No recovery.				
10		0%			No recovery.				
12					End of Boring				

Log of Boring SP05-6

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/19/96</i>	Date Completed: <i>7/19/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP05-8

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Topsoil	CL			
2		75%			Sand brown, coarse grained with coarse gravel and cinders. Moist.	SP			
4					DBO /lime waste. Saturated.	CL			
6		50%	55.5		Gravel with black fill, column bottoms, and wood (rail ties). Wet.	GC			
8			65.5		Silt black, very fine grained.	MH			
10		0%			No recovery.				
12					End of Boring				

Log of Boring SP05-7

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/19/96</i>	Date Completed: <i>7/19/96</i>	Total Depth Drilled (ft.): <i>10</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-10</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP05-7

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Topsol	CL			
			0.0		Industrial Fill, slag, cinders.	GP			
		90%			Sand brown, coarse grained, silty. Moist.	SM			
					DBO white.	CL			
					Sand brown, coarse grained, silty. Moist.	SM			
					Silt black, column bottoms.	MH			
		100%			Peat/Wood	PT			
					Gravel fine with coarse grained sand.	GW			
					Silt black with peat/wood. Column bottoms.	OL			
		20%			No recovery.				
					End of Boring				

Log of Boring SPO5-8

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/19/96</i>	Date Completed: <i>7/19/96</i>	Total Depth Drilled (ft.): <i>14</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-14</i>	Grout Type: <i>Bentonite chips</i>
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
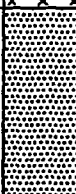


NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP05-8

[illegible]

BASF Wyandotte AOC6					Log of Boring SP05-8A				
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Industrial Fill coarse sand, slag, some fines, and topsoil.	GP			
2			55		DBO with coarse sand, fine gravel, and some fines. Saturated @ 3'.	CL			
4					Silt black. Column bottoms.	MH			
6			20+ >900		Wood orange.	PT			
					Sand grey, fine grained with some silt.	SM			
8					No recovery.				
					End of Boring				
10									
12									
14									
16									
18									
20									

Log of Boring SP06

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/19/96</i>	Date Completed: <i>7/19/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP07

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/18/96</i>	Date Completed: <i>7/18/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP07

[illegible]

Log of Boring SP07-1

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/18/96</i>	Date Completed: <i>7/18/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6					Log of Boring SP07-1				
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Industrial Fill with gravel, grass surface. Moist.	GP			
2		80%	>800		Column bottoms black, cinder-like, strong odor. Moist.	PT			
4					Sand grey, coarse grained with fine gravel. Saturated.	SP			
6		80%	>200		Sand black, fine grained, and silty. (Column bottoms?). Saturated.	SM			
8					Wood Fragments	PT			
10		10%	>200		Sand black, fine grained, and silty. Low recovery due to saturation.	SM			
12					End of Boring				
14									
16									
18									
20									

[illegible]

Log of Boring SPO9

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/29/96</i>	Date Completed: <i>7/29/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>8</i>	Ground Elevation (ft.):	

Completion Information



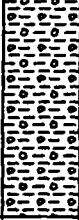



Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP08

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Topsoil dark brown with grass cover.	SC			
					Clay light brown with approximately 30% gravel.	CL			
2		30%	0		Clay dark grey and white, dark grey with orange mottling. Some gravel and coal fragments. White material is a possible ash deposit.	CL			
4									
6		0%			No recovery				
8			30/30		Peat brown, strong sewer odor.	PT			
10		100%			Silt dark grey with some clay. Saturated.	ML			
12					Clay grey with approximately 30% silt. Parting of brown peat.	OL			
14					End of Boring				

Log of Boring SP10

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/29/96</i>	Date Completed: <i>7/29/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>8</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP10

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Loam dark brown.	SC			
					Clay light brown with some gravel.	CL			
					Clay brown with sand and gravel.	CL			
-2		50%			Coal Slag dark brown, with clay and white ash deposits.	GC			
-4			0/0						
-6		0%			No recovery.				
-8									
-10		10%			Silt light grey with some clay. Saturated.	ML			
-12			0/15						
-14									
-16									
-18									
-20					End of Boring				

Log of Boring SP11

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/29/96</i>	Date Completed: <i>7/29/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>8</i>	Ground Elevation (ft.):	

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Log of Boring SP12

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/29/96</i>	Date Completed: <i>7/29/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>8.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP12

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Loam dark brown.	SC			
					Brick red.	GC			
			0/85		Gravel dark grey, sand, possible slag, coal fragments, and some clay.	CL			
2		85%			Clay grey with abundant silt.				
4					Debris light grey with sand and coal. Abundant concrete wash.	GP			
6		50%	0/80		Sand dark grey, fine grained, well sorted, silty, with some peat.	SM			
8					Clay brown with sand and gravel.	CL			
10		95%	6.8/600		Sand & Gravel dark grey, abundant organic material. Strong sewer odor. Saturated	GP			
12					Clay grey with abundant silt. Roots.	CL			
14					End of boring				

Log of Boring SP13

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/29/96</i>	Date Completed: <i>7/29/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5 perched</i> Ground Elevation (ft.):		

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Lean dark brown.	SC			
2		85%			Clay brown with gravel and sand. Partings of fine sand.	CL			
4			0/100		Gravel dark grey with sand. Saturated.	GP			
6		50%			Silt dark grey with sand.	ML			
8			5/1000+		Woody Material brown.	PT			
10		80%			Gravel dark grey and debris with some clay and sand. Saturated.	GC			
12			30/800		Silt dark grey with some clay.	ML			
14					End of boring				

BASF Wyandotte AOC6

Log of Boring SP14

[illegible]

Log of Boring SP14-1

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/29/96</i>	Date Completed: <i>7/29/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.25</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP14-1

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Loam dark brown.	SC			
2		75%	0		Gravel dark grey with cinders and sand. Moist.	GP			
4					Clay grey.	CL			
6		60%	38		Gravel dark grey with cinders and sand. Moist	GP			
8					Sand fine grained, well sorted, with some silt and black organic material. Saturated.	SM			
					Peat	PT			
					Clay grey.	CL			
10		80%	48		Sand light-brown, fine grained, well sorted, with some silt. Slight odor. Saturated.	SM			
12					End of boring				

Log of Boring SP15

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>7/29/96</i>	Date Completed: <i>7/29/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6</i>		Ground Elevation (ft.):

Completion Information




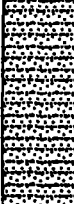
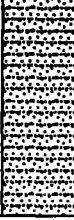
Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP15

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Loam dark brown.	SC			
2		80%	0		Clay brown, indurated with cobbles and sand.	CL			
4					Gravel with light grey concrete wash, debris, and sand.	GP			
6		25%	0		Sand dark grey, fine grained, well sorted with silt. Abundant black fine grained organic material. Saturated.	SM			
8					Sand light brown-grey, fine grained, well sorted with silt. Saturated.	SM			
10		50%	0						
12					End of Boring				

Log of Boring SP16

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined 2" Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/5/96</i>	Date Completed: <i>8/5/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/5/96</i>	Date Completed: <i>8/5/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-8	Grout Type: Bentonite chips
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP18

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/5/96</i>	Date Completed: <i>8/5/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP18

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand and gravel.	CL			
2		50%	149		Clinker Gravel brown and red with black gravel and black coal.	GP			
4					No recovery.				
6									
8									
10									
12									
14									
16									
18									
20					End of Boring				

Log of Boring SP18A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (In.): <i>2"</i>
Date Started: <i>8/5/96</i>	Date Completed: <i>8/5/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>8</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with fine sand and roots.	CL	x x x x x x x x		
0.0					DBO with black clinker gravel, coal, and medium grained sand.	CL	x x		
2		50%			No recovery.				
4									
6		70%			Clinker Gravel black with coal and sand.	GP			
					Woody Material brown.	PT			
8					Sand light grey-brown, fine grained, well sorted with silt. Saturated @ 8'.	SM			
10		20%			No recovery.				
12					End of Boring				

BASF Wyandotte AOC6

Log of Boring SP19

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand and roots.	CL			
2		50%	249		Clinker Gravel black, coal, and sand.	GP			
4					No recovery.				
4					End of Boring				

Log of Boring SP19A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/5/96</i>	Date Completed: <i>8/5/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP19A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand and roots.	CL			
2		40%	190.6		Clinker Gravel black and coarse grained sand with some red and yellow colored debris.	GP			
4					No recovery.				
6									
8									
10									
12									
14									
16									
18									
20					End of Boring				

Log of Boring SP19B

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (In.): <i>2"</i>
Date Started: <i>8/5/96</i>	Date Completed: <i>8/5/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP19C

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/5/96</i>	Date Completed: <i>8/5/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>7</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand and roots.	CL			
0.0		60%			Clinker Gravel black with some sand. Moist.	GP			
2					No recovery.				
4									
6		70%			Clinker Gravel black with some sand. Moist.	GP			
8					Sand light grey-brown, fine grained, well sorted with some silt. Saturated.	SM			
8.52					End of Boring				

Log of Boring SP19D

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/5/96</i>	Date Completed: <i>8/5/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>10</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP19D

[illegible]

Log of Boring SP20

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/5/96</i>	Date Completed: <i>8/5/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP20

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with some sand, gravel, and roots.	CL			
2		50%	181.6		Slag Gravel black, coarse grained sand, coal fragments and clay.	GP			
4					No recovery.				
6									
8									
10									
12									
14									
16									
18					End of Boring				

Log of Boring SP20A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/5/96</i>	Date Completed: <i>8/5/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP20A

[illegible]

BASF Wyandotte AOC6

Log of Boring SP21

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with sand, gravel, and roots.	CL			
2		25%	0.0		Clinker Gravel black with sand, and coal fragments.	GP			
4					No recovery.				
6		50%			Clinker Gravel black with sand and coal fragments. Saturated.	GP			
8			331		Sand light grey-brown. Saturated	SW			
8					End of Boring				

Log of Boring SP22

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/6/96</i>	Date Completed: <i>8/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>1</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP22

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with sand, gravel, and roots.	CL			
			0.0		Clinker Gravel black with black coal fragments, and fine grained sand.	GP			
			139.9		Clinker Gravel as above. Saturated.	GP			
-2		50%			No recovery				
-4									
-6		50%			Clinker Gravel black with black coal fragments.	GP			
-8			48.9/ 596		D80 white sandy clay. Saturated.	CL			
					Cedar Peat brown and red.	PT			
					End of boring				

Log of Boring SP22A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>	
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>	
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/6/96</i>	Date Completed: <i>8/6/96</i>
Total Depth Drilled (ft.): <i>8</i>	
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>	Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP22A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with sand, gravel, and roots.	CL			
2		60%	0.0		Clinker Gravel black with some sand.	GP			
4					DBO white, sandy. Minor saturated layer (1" thick) on top of DBO	CL			
6		90%			DBO white. Saturated.	CL			
8			390		Cedar Peat brown.	PT			
					Sand grey-brown, fine grained, well sorted with silt. Saturated.	SM			
					End of boring				

Log of Boring SP23

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/6/96</i>	Date Completed: <i>8/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>2</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP23

[illegible]

Log of Boring SP24

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/6/96</i>	Date Completed: <i>8/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>1.8</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-8	Grout Type: Bentonite chip
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP24

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with sand, gravel, and roots.	CL			
		95%	0.0		Clinker Gravel black with sand.	GP			
2			1.4		DBO white with coarse grained sand.	CL			
4			53.6		DBO as above. Dry to moist.	CL			
6		100%							
8			468		Cedar Peat red-brown.	PT			
					End of boring.				

Log of Boring SP24-1

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/9/96</i>	Date Completed: <i>8/9/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, gravel, and roots.	CL			
0.0					Gravel brown and slag with some clay.	GC			
60%					as above. Saturated.	GC			
6.8					No recovery.				
60%					Slag Gravel black with sand. Saturated.	GP			
2.0					Cedar Peat red. Moist.	PT			
145.8					No recovery, wet tube.				
2%					Sand light green-brown, fine grained with silt. Saturated.	SM			
2.14					End of Boring				

Log of Boring SP25

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010








Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/6/96</i>	Date Completed: <i>8/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6					Log of Boring SP25				
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with sand, gravel, and roots.	CL			
2		75%			DBO white.	CL			
4			0.0		Sand brown, coarse grained with some clay.	SC			
					Clinker Gravel black with sand. Moist.	GP			
6		50%	2.8		No recovery.				
					Clinker Gravel black with sand. Saturated.	GP			
					DBO with green and yellow coarse grained sand. Moist (plastic).	CL			
8			369		Cedar Peat red-brown	PT			
					End of boring.				
10									
12									
14									
16									
18									
20									

Log of Boring SP26

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/6/96</i>	Date Completed: <i>8/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6.1</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP26

[illegible]

Log of Boring SP27

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/6/96</i>	Date Completed: <i>8/6/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP27

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with sand, gravel, and roots.	CL			
2		90%			Clay brown, with coal and clinker fragments, some sand.	CL			
4			0.0		DBO light grey with some sand and gravel.	CL			
6		40%			No recovery.				
8			2.8		Sand brown, coarse grained, gravel, some clay.	SP			
10			64.2		Sand black, coarse grained with abundant coal and clinker fragments. Saturated.	SP			
12					Cedar Peat red-brown.	PT			
14		50%			No recovery.				
16			3.8		Sand light grey-brown, fine-grained, well sorted, with some silt. Saturated.	SM			
18					End of boring.				

Log of Boring SP28

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/6/96</i>	Date Completed: <i>8/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information






Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP28

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, with sand, gravel, and roots.	CL			
2		100%	0.0		DBO white to gray. Moist @ 3'	CL			
4			0.0		DBO with dark brown gravel. Saturated.	CL			
6		90%	1.8		DBO grey to yellow.	CL			
8			3.8		Cedar Peat red-brown. End of boring.	PT			

Log of Boring SP29

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/6/96</i>	Date Completed: <i>8/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP30

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/6/96</i>	Date Completed: <i>8/6/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>8</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP31

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>	
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>	
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/6/96</i>	Date Completed: <i>8/6/96</i>
Total Depth Drilled (ft.): <i>12</i>	
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3</i>	Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP31A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/8/96</i>	Date Completed: <i>8/8/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, silt, gravel, and roots.	CL			
2		70%			Clay brown with sand and a trace of gravel.	CL			
			11.0		Coaly Material black.	PT			
4			0.0		DBO brown-grey and silt plus sand. Plastic (moist).	CL			
6		100%	0.0		Sand brown, coarse grained, medium sorted with clay and coal fragments. Saturated.	SC			
			0.0		Clay brown-grey with sand. Dry.	CL			
8			0.0		Sand green, fine grained with clay and silt. Wet.	SC			
					End of Boring				

Log of Boring SP31B

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/8/96</i>	Date Completed: <i>8/8/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>7.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP31C

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/8/96</i>	Date Completed: <i>8/8/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.5</i>	Ground Elevation (ft.):	

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP31D

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/8/96</i>	Date Completed: <i>8/8/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6.0</i>		Ground Elevation (ft.):

Completion Information

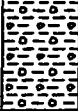


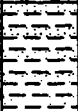


Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP31D

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand and some gravel.	CL			
2		80%	0.0		Slag Gravel black, pumice-like.	GW			
					DBO white.	CL			
4			0.0		Clay brown-grey with medium grained sand and occasional coal fragment.	CL			
6		50%			No recovery.				
8			5800		DBO white. Plastic.	CL			
					Coaly Material dark brown to black. Saturated.	PT			
					End of Boring				

Log of Boring SP32

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/6/96</i>	Date Completed: <i>8/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chip</i>
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NO WELL INSTALLED

Explanation & Comments

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[illegible]

Log of Boring SP32-1

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP32-1

[illegible]

Log of Boring SP32-2

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Log of Boring SP32-2

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, silt, and gravel.	CL			
1.630		60%			Coaly Material brown-black with vesicles.	PT			
					No recovery.				
					End of Boring				

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>	
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>	
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i> Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):	Ground Elevation (ft.):

Grout Interval (ft. bgl): 0-4	Grout Type: Bentonite chips
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP32-3

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, silt, and gravel.	CL			
					Sand brown and tan, mottled, fine grained, well sorted with clay and DBO.	SC			
2		50%	161.2		Tarry Material dark brown to black.	PT			
4					No recovery.				
6									
8									
10									
12									
14									
16									
18									
20					End of Boring				

Log of Boring SP32-4

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-8	Grout Type: Bentonite chips
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP32-4

[illegible]

BASF Wyandotte AOC6

Log of Boring SP32-5

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0									
1.580		80%	1580		Tar black with some gravel.	PT			
18.6			18.6		Coaly Material black with debris and gravel.	PT			
					Sand dark brown, fine grained, and well sorted.	SW			
					End of Boring				

Log of Boring SP33

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/7/96</i>	Date Completed: <i>8/7/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP33

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, silt, and gravel.	CL			
0.0					Sand brown, clay, and silt with some gravel.	SC			
6.8					Sand brown, silty with some clay.	PT			
2	50%				Coaly Material dark brown.				
4					No recovery.				
6	70%		585		Sand black, fine grained, clay, and fine grained black coaly material. Saturated.	SW			
			610		Sand dark grey, fine grained, well sorted with some silt. Moist-possibly compacted by core barrel.	SM			
			140		Cedar Peat brown. Moist.	PT			
8			35.6		Sand dark grey, fine grained, well sorted with silt. Moist.	SM			
					End of Boring				

Log of Boring SP33-1

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Line Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/7/96</i>	Date Completed: <i>8/7/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP33-1

[illegible]

Log of Boring SP33A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/7/96</i>	Date Completed: <i>8/7/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>7</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand and silt.	CL			
2		80%			Clay brown with sand, gravel, and roots.	CL			
4			7000+		Tar black.	PT			
6		80%	7000+		No recovery.				
8			7000+		Coal Tar black with some wood and sand.	PT			
10			10000+		Sand grey brown, fine grained with silt. Moist.	SM			
12					End of Boring				

Log of Boring SP33B

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/7/96</i>	Date Completed: <i>8/7/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

BASF Wyandotte AOC6

Log of Boring SP33Br

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, silt, and gravel.	CL			
2		100%			Clay brown, some orange mottling with some sand and silt.	CL			
4			693		Clay dark grey with disseminated black organic material (coal), some sand and silt.	CL			
					End of Boring				

Log of Boring SP33C

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/8/96</i>	Date Completed: <i>8/8/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/8/96</i>	Date Completed: <i>8/8/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

[illegible]

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-4	Grout Type: Bentonite chips
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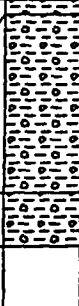
NO WELL INSTALLED

Explanation & Comments

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

BASF Wyandotte AOC6

Log of Boring SP33F

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, silt, and gravel.	CL			
		70%	0.0		Clay brown with gravel and debris.	CL			
			49.6		Clay black with slag gravel and debris.	CL			
					No recovery.				
					End of Boring				

Log of Boring SP34

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/9/96</i>	Date Completed: <i>8/9/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP34

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, silt, and gravel.	CL			
			0.0		Clay brown with sand and occasional gravel or coal fragment.	CL			
2		40%							
4					No recovery.				
6		70%	7.4		DBO white with sand. Saturated.	CL			
8			264 1024		Coaly Material dark brown, medium grained. Saturated.	PT PT			
					Cedar Peat red. Moist.				
10		10%			No recovery.				
12			63.9		Clay grey, plastic.	CL			
					Sand light grey. Saturated.	SW			
					End of Boring				

Log of Boring SP37

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>	Ground Elevation (ft.):	

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Sand brown, fine grained with silt, clay, and gravel.	SM SP			
1					Sand dark brown, fine grained with gravel and coal fragments.				
2		50%			Slag Gravel black with sand.	GW			
3					No recovery.				
4			0.0		Sand brown, fine grained, well sorted with silt. Saturated.	SM			
6		100%	0.0		Sand dark grey, fine grained, well sorted with silt. Saturated.	SM			
8			0.0		Sand brown, fine grained, well sorted with silt. Saturated.	SM			
8					End of Boring				

Log of Boring SP37A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: BASF		
Drilling Company: Environmental Science and Engineering, Inc.		
Drilling Rig: Keck (TM) Soil Punch		Drilling Method: Hydraulic Hammer
Soil Sampling Device: 4'Lined	Steel Sampler	Borehole Diameter (in.): 2"
Date Started: 8/12/96	Date Completed: 8/12/96	Total Depth Drilled (ft.): 4
Apparent Depth to Saturation While Drilling (ft. bgl): 3.6		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-4	Grout Type: Bentonite chips
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP37A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay reddish brown with sand and gravel.	CL			
-2		70%	0.0		Sand dark reddish-brown with clay, gravel, slag, and brick.	SC			
-4			43		as above. Saturated.	SC			
					End of Boring				

Log of Boring SP37B

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP37B

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand and gravel.	CL			
2		85%	0.0		Clay orange-brown with sand, gravel, mixed with debris, and slag.	CL			
4			5.4		Slag Gravel black. Saturated. No recovery.	GW			
6		80%	202		Tarry Material black and sandy.	PT			
8			0.0		Sand dark brown and tan, mottled, fine grained, well sorted, and silty. Sand is compact and moist. Probably saturated.	SM			
8					End of Boring				

Log of Boring SP38

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand and gravel.	CL			
		60%	0.0		Slag Gravel black and yellow with sand and some clay.	GP			
					No recovery				
		60%	204		Slag Gravel black. Saturated.	GW			
			64		Cedar red.	PT			
			2.7		Sand tan and dark grey, laminated, fine grained, well sorted and silty. Compact. Probably saturated.	SM			
					End of Boring				

Log of Boring SP39

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP39

[illegible]

Log of Boring SP40

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (In.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP40

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand and gravel.	CL			
					Clay brown and sandy.	CL			
2		80%	902		Coaly Material dark brown.	PT			
4			90.2		Clay dark grey with sand and speckled white DBO fragments.	CL			
					End of Boring				

Log of Boring SP41

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010






Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand and gravel.	CL			
2		80%	0.0		Clay dark brown with sand, silt, and debris.	CL			
4			38		Peat dark grey with sand. Saturated. No recovery.	PT			
6		90%	163		Cedar Peat red. Moist.	PT			
8			5.8		Sand dark grey and tan, fine grained, well sorted, and silty. Compact.	SM			
8					End of Boring				

Log of Boring SP41A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010




Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6					Log of Boring SP41A				
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay dark orange and brown, mottled with sand and gravel.	CL			
2		95%	0.0		DBO tan with sand.	CL			
4			1994		Coaly Material black.	PT			
					End of Boring				

Log of Boring SP41B

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: BASF		
Drilling Company: Environmental Science and Engineering, Inc.		
Drilling Rig: Keck (TM) Soil Punch	Drilling Method: Hydraulic Hammer	
Soil Sampling Device: 4'Lined Steel Sampler	Borehole Diameter (in.): 2"	
Date Started: 8/12/96	Date Completed: 8/12/96	Total Depth Drilled (ft.): 8
Apparent Depth to Saturation While Drilling (ft. bgl): 6	Ground Elevation (ft.):	

Completion Information

Grout Interval (ft. bgl): 0-8	Grout Type: Bentonite chips
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP41B

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, gravel, and silt.	CL			
-2		90%	0.0		Clay dark brown with black slag gravel and sand.	CL			
-4			0.0		DBO tan.	CL			
-4			0.0		Coaly Material black to dark brown.	PT			
-6		50%			No recovery				
-8			190		Slag Gravel black with sand. Saturated.	GW			
-8			63		Sand grey-brown, fine grained, well sorted, and silty. Compact. Probably Saturated.	SM			
-8					End of Boring				

Log of Boring SP42

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP42A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP43

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/12/96</i>	Date Completed: <i>8/12/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP43

[illegible]

Log of Boring SP44

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/13/96</i>	Date Completed: <i>8/13/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP44

[illegible]

Log of Boring SP45

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (In.): <i>2"</i>
Date Started: <i>8/13/96</i>	Date Completed: <i>8/13/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP45

[illegible]

Log of Boring SP46

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010





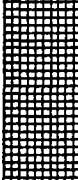
Client: <i>BASF</i>	
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>	
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/13/96</i>	Date Completed: <i>8/13/96</i>
Total Depth Drilled (ft.): <i>8</i>	
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.5</i>	Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6					Log of Boring SP46				
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, gravel, and silt.	CL			
2		80%			Clay light brown with fine grained sand and some gravel.	CL			
			0.0		Slag black to dark brown (cobble size), sand and some clay.	GW			
4					No recovery.				
			62		DBO dark grey. Moist, probably saturated.	CL			
6		60%			Coal Material dark brown and granular. Saturated.	PT			
8			93		End of Boring				
10									
12									
14									
16									
18									
20									

Log of Boring SP47

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/13/96</i>	Date Completed: <i>8/13/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3</i>		Ground Elevation (ft.):

Completion Information




Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP47

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, gravel, and silt.	CL			
0.0					Clay brown and grey with coal and DBO fragments.	CL			
2300					Coaly Material black.	PT			
					No recovery. (Probably soft DBO underneath which cannot support the entry pressure of the core barrel.)				
					End of Boring				

Log of Boring SP48

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/13/96</i>	Date Completed: <i>8/13/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP49

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/13/96</i>	Date Completed: <i>8/13/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP48

[illegible]

Log of Boring SP50

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/13/96</i>	Date Completed: <i>8/13/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED


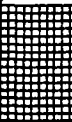
Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP50

[illegible]

Log of Boring SP51

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay grey-brown, with some sand and gravel.	CL			
2		60%	8794		Coal Material dark brown to black.	PT			
4					No recovery.				
					End of Boring				

Log of Boring SP52

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: BASF		
Drilling Company: Environmental Science and Engineering, Inc.		
Drilling Rig: Keck (TM) Soil Punch		Drilling Method: Hydraulic Hammer
Soil Sampling Device: 4'Lined	Steel Sampler	Borehole Diameter (in.): 2"
Date Started: 8/13/96	Date Completed: 8/13/96	Total Depth Drilled (ft.): 4
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-4	Grout Type: Bentonite chips
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP52

[illegible]

Log of Boring SP52-1

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/13/96</i>	Date Completed: <i>8/13/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information



Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP52-1

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown-grey, with sand and gravel.	CL			
2		50%	2880		Coal Material dark brown.	PT			
4					No recovery.				
6									
8									
10									
12									
14									
16									
18									
20					End of Boring				

BASF Wyandotte AOC6

Log of Boring SP52-2

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, gravel, and silt.	CL			
			0.0		Clay grey and tan, mottled with some sand.	CL			
		80%	0.0		Coal Material black and brown with sand and brick fragments.	PT			
			8.8		Clay grey with sand and DBO.	CL			
					Sand dark grey, fine grained, well sorted, and silty. Moist.	SM			
					No recovery.				
		95%			Sand dark grey, fine grained, well sorted, and silty. Moist.	SM			
			68.6		Cedar Peat red.	PT			
			16.2		Sand dark brown, fine grained, well sorted, and silty. (Compact). Saturated.	SM			
					End of Boring				

Log of Boring SP53

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/13/96</i>	Date Completed: <i>8/13/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP54

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/14/96</i>	Date Completed: <i>8/14/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP54

[illegible]

Log of Boring SP54A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/25/96</i>	Date Completed: <i>9/25/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP54A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Grass/Topsoil.	CL			
					Sand brown.	SW			
-2			5/0		Tar & asphalt grinds.	PT			
-4					Sand dark brown, silty.	SM			
					End of Boring				

Log of Boring SP54B

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/25/96</i>	Date Completed: <i>9/25 /96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3</i>		Ground Elevation (ft.):

Completion Information





Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP54B

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Topsoil with grass.	CL			
					Sand brown, fine-medium grained fill.	SW			
2		90%	5.0		Asphalt Grinds black, gravelly.	GP			
4					Sand dark brown, fine grained, and silty.	SM			
					End of Boring				

BASF Wyandotte AOC6

Log of Boring SP55

[illegible]

Log of Boring SP55A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/25/96</i>	Date Completed: <i>9/25 /96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP55A

[illegible]

Log of Boring SP56

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/14/96</i>	Date Completed: <i>8/14/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP58

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay grey with gravel and coal.	CL			
2		95%	363		Coal Material dark brown.	PT			
4			393		Sand light brown, fine grained, well sorted, and silty.	SM			
					End of Boring				

Log of Boring SP56-1

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/14/96</i>	Date Completed: <i>8/14/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP56-1

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Coal and cobbles.	PT			
2		85%			Clay tan with sand and gravel.	CL			
			0.0		Slag Gravel black.	GW			
4					No recovery. Core tip wet.				
			20.1		Sand black, fine grained, and well sorted.	SW			
			16.8		Red Cedar	PT			
6		40%	9.7		Sand dark grey, fine grained, well sorted, and silty. Saturated.	SM			
8					No recovery.				
					End of Boring				

Log of Boring SP57

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/15/96</i>	Date Completed: <i>8/15/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6						Log of Boring SP57	
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log
			Values	Profile			
0					Clay brown with sand, gravel, and silt.	CL	
					Clay with tan cobbles, sand, and gravel. Moist 2" layer @ 1'.	CL	
-2		60%	0.0		Slag Gravel black with concrete cobbles.	GW	
-4			4.2		No recovery.		
					Sand black, fine grained, well sorted, and silty. Saturated.	SM	
-6		20%			No recovery.		
-8					End of Boring		

Log of Boring SP57A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/15/96</i>	Date Completed: <i>8/15/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>7.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP57A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Sand dark brown with clay, silt, debris, and coal fragments.	SM			
2		100%	0.0		Coal Material brown.	PT			
4			143		Clay dark grey with sand and gravel.	CL			
6		40%			Sand dark grey, medium grained, poorly sorted with gravel and slag.	SP			
8			163		No recovery.				
10			182		Sand black, fine grained, and well sorted. Saturated.	SW			
12					Cedar Peat red.	PT			
14					Sand dark grey, fine grained, well sorted, and silty. Saturated.	SM			
16					End of Boring				

Log of Boring SP58

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/15/96</i>	Date Completed: <i>8/15/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP58

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, gravel, and silt.	CL			
		60%	0.0		Sand black, fine grained with black disseminated coal. SAMPLE TAKEN.	SW			
					Gravel grey with sand. Saturated.	GW			
					No recovery				
			10.1		Sand black, fine grained, well sorted and silty with brown mottling. Saturated.	SM			
			19.1		Cedar red.	PT			
		90%	16.8		Sand black and brown mottled, fine grained, well sorted, and silty.	SM			
					Clay brown. Plastic.	CH			
			0.0		Clay dark brown with sand and organic material. Plastic. Not wet.	CL			
			3.8		Clay grey. Plastic.	CL			
					End of Boring				

Log of Boring SP59

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/15/96</i>	Date Completed: <i>8/15/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>8</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP60

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/15/96</i>	Date Completed: <i>8/15/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP60

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, gravel, and sill.	CL			
2		90%	0.0		Clay brown with sand, gravel, and coal fragments.	CL			
4			0.0		Sand brown, medium grained, and medium sorted.	SW			
					No recovery.				
6		90%	264		Coaly Material brown. Saturated @ 5.5'.	PT			
8			147		Sand black, oily, fine grained and silty	SW			
					End of Boring				

Log of Boring SP60-1

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/15/96</i>	Date Completed: <i>8/15/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP61

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/15/96</i>	Date Completed: <i>8/15/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.9</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP81

[illegible]

Log of Boring SP61A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/25/96</i>	Date Completed: <i>9/25/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.2</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP81A





Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Topsoil and grass.	CL			
2		75%	0.0		Sand fine grained, mixed with DBO and clay. Moist.	SC			
4					Sand dark grey, fine to medium grained. Saturated.	SW			
					End of Boring				

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/15/96</i>	Date Completed: <i>8/15/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Grout Interval (ft. bgl): 0-4	Grout Type: Bentonite chips
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6					Log of Boring SP62				
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, gravel, and silt.	CL			
					Clay brown with sand, gravel, and coal fragments.	CL			
2		90%	0.0		DBO tan. Plastic.	CL			
4			13.8		Coaly Material dark brown.	PT			
					End of Boring				

Log of Boring SP62A

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/25/96</i>	Date Completed: <i>9/25/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6

Log of Boring SP82A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Topsoil and grass.	CL			
2		85%			Clay dark brown, some sand, fine, peds, appearance of old topsoil. Moist.	CL			
4			>15.0		Clay with sand and strong odor. Saturated.	CL			
					End of Boring				

Log of Boring SP63

BASF Wyandotte AOC6
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4'Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/15/96</i>	Date Completed: <i>8/15/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC6





Log of Boring SP63

[illegible]

BASF Wyandotte AOC6

Log of Boring SP64

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, gravel, and silt.	CL			
2		60%	0.0		Slag Gravel black and yellow with sand.	GW			
4					No recovery.				
20					End of Boring				

BASF Wyandotte AOC6					Log of Boring SP65				
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0			0.0		Clay brown with sand, gravel, and silt.	CL			
					Clay brown with sand, gravel, and coal fragments.	CL			
					Slag Gravel black with sand. SAMPLE TAKEN.	GW			
-2					As above. Saturated.	GW			
					No recovery.				
-4					End of Boring				
-6									
-8									
-10									
-12									
-14									
-16									
-18									
-20									

Soil Boring Logs for AOC 7

Log of Boring SP01

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/22/96</i>	Date Completed: <i>8/22/96</i>	Total Depth Drilled (ft.): <i>16</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-16</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SPO1

[illegible]

Log of Boring SPO2

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/22/96</i>	Date Completed: <i>8/22/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.5</i>		Ground Elevation (ft.):

Completion Information









Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP02

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Sand tan, fine grained with gravel. Dry.	SP			
2		75%	0/0		Sand blue, red, tan, white, fine to medium grained, dry, and some fine particles of slag.	SW			
4			0/0		Sand reddish-orange, fine to medium grained with trace slag and gravel. Dry to moist.	SP			
			0/0		Sand, as above reddish, got coarser with depth (8" zone of blue).	SP			
6		75%			Gravel dark brown to black, fine with medium grained sand. Saturated @ 5.5'.	GW			
8			0/1		Sand black, fine grained with trace silt. Saturated.	SW			
10		??%			Sand tan, fine grained with trace silt. Saturated.	SW			
12					Clay brownish-grey and stiff. Moist.	CL			
					End of boring				

Log of Boring SP03

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010


Client: <i>BASF</i>	
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>	
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/28/96</i> Date Completed: <i>8/28/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):	Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): 0-4	Grout Type: Bentonite chips
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NO WELL INSTALLED

Explanation & Comments



BASF Wyandotte AOC7

Log of Boring SP03

[illegible]

Log of Boring SPO4

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/28/96</i>	Date Completed: <i>8/28/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SPO4

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand and silt.	CL			
2		70%			Concrete Debris light grey with sand.	GW			
4					Clay grey with sand, fine gravel, and trace red brick material. SAMPLE TAKEN.	CL			
					No recovery.				
					End of boring				

Log of Boring SP05

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/28/96</i>	Date Completed: <i>8/28/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP05

[illegible]

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand, silt, and gravel.	CL			
			0.0		Silt grey-brown with clay and cobblestones.	ML			
					Sand black with silt and gravel.	SM			
		95%			DBO tan and sandy.	CL			
					Clay brown-grey with sand, gravel, and coal fragments.	CL			
					Debris brown-red with sand, gravel, and some clay. SAMPLE TAKEN.	GP			
					No recovery.				
					End of boring				

Log of Boring SP07

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/28/96</i>	Date Completed: <i>8/28/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP07

[illegible]

Log of Boring SP07RI

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (In.): <i>2"</i>
Date Started: <i>8/28/96</i>	Date Completed: <i>8/28/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP07RI

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with sand.	CL			
					Clay dark brown to black with sand and silt.	CL			
					Prussian blue.	CL	x x x		
		90%			D80 tan.				
					Sand orange, fine grained, well sorted with limonite staining.	SW			
					No recovery.				
					End of boring				

Log of Boring SPO7RII

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/28/96</i>	Date Completed: <i>8/28/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP07RII

[illegible]

Log of Boring SP07A

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/28/96</i>	Date Completed: <i>8/28/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay light brown, sandy, silty with roots.	CL			
					Gravel dark grey, clay with some sand.	GC			
-2		75%			Clay dark orange-brown, laminae stained with sand and silt.	CL			
					D80 tan.	GW			
					Brick Gravel red with sand and some coal.	SW			
-4					Sand orange-brown, fine grained, well sorted with laminae.				
					No recovery.				
					End of boring				

Log of Boring SP07B

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/28/96</i>	Date Completed: <i>8/28/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Log of Boring SP07B

BASF Wyandotte AOC7

Log of Boring SP08

[illegible]

Log of Boring SPO8A

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/28/96</i>	Date Completed: <i>8/28/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay grey-brown, sandy with gravel.	CL			
					Clay dark brown, sandy with organic matter.	CL			
					Cobblestones light grey, possibly concrete.	GW			
		80%			Sand dark orange-brown, fine grained, well sorted with laminae.	SW			
					Sand orange-brown as above with blue mottling and laminae structure.	SW			
					No recovery.				
					End of boring				

Log of Boring SP08B

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (In.): <i>2"</i>
Date Started: <i>9/3/96</i>	Date Completed: <i>9/3/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP08B

[illegible]

Log of Boring SP09

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>8/28/96</i>	Date Completed: <i>8/28/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP09A

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/3/96</i>	Date Completed: <i>9/3/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP09A

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Sand grey-brown, fine grained with clay and roots.	SC			
2		90%			Sand light grey-brown, fine grained with silt, clay, and concrete debris.	SM			
					Sand brown, fine grained with silt, clay, and some concrete debris (gravel size). SAMPLE & MS/MSD TAKEN.	SM			
			0.0		Concrete Debris white.	GW			
					Sand dark brown with silt.	SM			
			0.0/20		No recovery.	SM			
					Sand dark brown, fine grained, well sorted with silt, trace slag gravel, and an oily stain.				
6		95%			Sand brown laminated, fine grained with silt. Saturated.	SM			
8					Clay brown-grey and plastic.	CH			
					End of boring				

Log of Boring SP10

BASF Wyandotte AOC7
 1609 Biddle, Wyandotte, Michigan
 Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (In.): <i>2"</i>
Date Started: <i>8/28/96</i>	Date Completed: <i>8/28/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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


NO WELL INSTALLED

Explanation & Comments

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BASF Wyandotte AOC7

Log of Boring SP10

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown to grey-brown, silty with sand and wood.	CL			
2		95%			Clay brown, silty with sand and a clast of coal.	CL			
4					Clay orange and green-brown, mottled, sandy with slag and coal clasts.	CL			
					Clay dark orange-brown with sand, silt, and cobblestones. *	CL			
					End of boring				
					* second duplicate spoon taken for sample volume- 8" from the first hole contains 1/8" Prussian Blue @ 3' depth.				

Log of Boring SP10A

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hand Auger</i>
Soil Sampling Device: <i>4"</i>	<i>Steel Bucket Auger</i>	Borehole Diameter (in.): <i>4"</i>
Date Started: <i>9/3/96</i>	Date Completed: <i>9/3/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay grey-brown with gravel and sand.	CL			
2					Sand dark brown, fine grained, well sorted with silt, clay, and gravel.	SM			
4					Gravel dark brown to black with sand and silt. SAMPLE & DUPLICATE TAKEN.	GP			
4					Sand brown, fine grained, well sorted with silt. Moist. End of boring	SM			

Log of Boring SP11

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/3/96</i>	Date Completed: <i>9/3/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP12

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/3/96</i>	Date Completed: <i>9/3/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP13

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/3/96</i>	Date Completed: <i>9/3/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP14

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/3/96</i>	Date Completed: <i>9/3/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP14

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Asphalt	SW			
					Sand brown, fine grained, well sorted with limestone cobbles.	SW			
					Sand as above with trace Prussian Blue.	SM			
					Sand black and grey-tan mottled, fine grained, well sorted with silt and laminae.				
					No recovery.				
					End of boring				

Log of Boring SP15

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/3/96</i>	Date Completed: <i>9/3/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.1</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP16

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Asphalt				
					Sand grey-brown, fine grained, clay with some gravel and slag.	SC			
					Slag black with sand and coal.	GW			
					Sand orange-brown, fine grained, well sorted with silt. Mottled texture.	SM			
					No recovery.				
					End of boring				

Log of Boring SP17

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/5/96</i>	Date Completed: <i>9/5/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>3.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP17

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, silty with sand and roots.	CL			
2		95%			Sand brown, fine grained, well sorted, and silty.	SM			
4			10.0		Sand orange-brown, fine grained, well sorted with silt. Limonite staining. Saturated.	SM			
6		100%	10.0		Sand grey-brown as above.	SM			
8					Clay grey-brown. Stiff.	CL			
					End of boring				

Log of Boring SP18

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/5/96</i>	Date Completed: <i>9/5/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown, silty with sand and roots.	CL			
					Sand dark brown, fine grained with some clay and slag.	SW			
2		90%	/0.0		Sand orange-brown, fine grained, well sorted with silt.	SM			
4					No recovery.				
					Sand as above.	SM			
					Loam dark brown.	CL			
6		100%	/0.0		Sand grey-brown, fine grained, well sorted with dark grey mottling. Possibly saturated. (Compact).	SW			
8					Clay grey-brown. Stiff.	CL			
					End of boring				

Log of Boring SP19

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/5/96</i>	Date Completed: <i>9/5/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.2</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown with fine grained sand, some gravel, silt, and roots.	CL			
1		90%	/0.0		Gravel dark grey with sand and some clay.	GW			
2			/0.0		Sand orange-brown, fine grained, well sorted with silt.	SM			
3			/0.0		Loam dark brown.	CL			
4			/0.0		Sand orange-brown and orange mottled, fine grained, well sorted, and silty. Saturated.	SM			
5		100%	/0.0		Sand light grey, fine grained, well sorted with trace gravel.	SW			
6					Clay grey, laminated with trace gravel. Stiff. (dropstone?).	CL			
7					End of boring				

Log of Boring SP20

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/5/96</i>	Date Completed: <i>9/5/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP20

[illegible]

Log of Boring SP21

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/5/96</i>	Date Completed: <i>9/5/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP22

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/5/96</i>	Date Completed: <i>9/5/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Log of Boring SP23

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010







Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/6/96</i>	Date Completed: <i>9/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7					Log of Boring SP22				
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Sand brown-grey, fine grained with silt, gravel, some clay and roots.	SM			
					Slag Gravel black with sand and some clay or silt.	GW			
2		85%			Sand brown, fine grained, well sorted, and silty.	SM			
4					No recovery.				
			/1.0		Sand orange-brown, laminated, fine grained, well sorted, and silty. Saturated.	SM			
6		70%			Sand brown-grey as above.	SM			
			/1.0		Clay brown-grey and stiff.	CL			
					No recovery.				
					End of boring				
10									
12									
14									
16									
18									
20									

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Sand dark brown, fine grained with silt, some clay and roots.	SM			
					Limestone Cobbles brown, fine grained sand, silt, and trace clay.	GP			
2		95%	0/0		Sand brown, fine grained, well sorted, silty with a trace of slag gravel.	SM			
4			0/0		Sand orange-brown as above, trace limonite nodular. Saturated @ 5'.	SM			
6		100%	0/0		Sand brown-grey and dark grey laminated, fine grained, well sorted, and silty. Saturated.	SM			
8			0/0		End of boring				

Log of Boring SP24

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/6/96</i>	Date Completed: <i>9/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Log of Boring SP24

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Sand brown, fine grained with silt, gravel, trace clay, and roots.	SM			
2		90%	0/0		Sand orange-brown, dark brown & tan mottled, fine grained, well sorted with some silt and trace coal fragments.	SM			
4			0/0		Loam dark brown with roots.	CL			
					Sand orange-brown to tan, fine grained, well sorted with some silt.	SM			
					No recovery.				
6		50%			Sand orange-brown, fine grained, well sorted, and silty. Becoming grey-brown @ 6'. Saturated.	SM			
8					No recovery.				
10					End of boring				

Log of Boring SP25

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/6/96</i>	Date Completed: <i>9/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP26

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i> <i>Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/6/96</i>	Date Completed: <i>9/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Log of Boring SP27

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/6/96</i>	Date Completed: <i>9/6/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.8</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP28

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/6/96</i>	Date Completed: <i>9/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7						Log of Boring SP28	
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log
			Values	Profile			
0					Sand brown, fine grained, silt, clay, some gravel, and roots.	SM	
2		95%	O/O		Sand orange-brown, tan, and dark brown mottled, fine grained with silt, gravel, and clay clasts.	SM	
4					Sand as above. Moist.	SM	
6		75%	O/2		Sand dark grey and green-brown laminated, fine grained, well sorted with silt. Saturated.	SM	
					Clay grey and stiff.	CL	
8					No recovery.		
					End of boring		
10							
12							
14							
16							
18							
20							

Log of Boring SP29

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environemntal Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/6/96</i>	Date Completed: <i>9/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.6</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Sand brown, fine grained, silt, some clay with roots.	SM			
1					Limestone Cobbles red brick, gravel, and sand.	GP			
2		95%							
3			0/0		Clay dark brown with coarse grained sand, gravel, and limestone cobbles. Some coal fragments.	CL			
4									
5			0/1		Sand green-brown and black, mottled, fine grained, well sorted, and silty.	SM			
6		90%							
7			0/1		Sand black, fine grained, well sorted, and silty. Saturated.	SM			
8					Sand grey, fine grained, well sorted, silty. Saturated.	SM			
9					Clay grey, stiff.	CL			
10					End of boring.				

Log of Boring SP30

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/6/96</i>	Date Completed: <i>9/6/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5.0</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP30

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Loam brown.	SM			
2		90%			Limestone Cobbles fine sand, silt, roots, coal fragments, trace clay.	GP			
4			0/0		Clay brown to dark brown, sand, silt, some gravel, trace of coal fragment, and DBD fragment.	CL			
4					Clay brown, stiff, probably a clast.	CL			
5					Sand brown and dark brown, mottled, fine grained, well sorted, with silt and clay clasts.	SM			
6		90%			Sand orange-brown, fine grained, well sorted. Saturated.	SW			
8			0/1		Sand grey, fine grained, well sorted, silty. Saturated. Trace Prussian Blue @ 8' located around a possible organic nucleus.	SM			
8					Clay grey, stiff with a trace of red gravel.	CL			
10		50%			No recovery.				
12					End of boring.				

Log of Boring SP31

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (In.): <i>2"</i>
Date Started: <i>9/6/96</i>	Date Completed: <i>9/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.7</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP31

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Sand brown, fine grained, silt, some clay and roots.	SM			
2		90%			Sand light brown, fine grained, gravel, and some clay.	SC			
4			0/0		Clay dark brown, fine grained sand, some concrete debris, dark brown soil clasts, and brick debris.	CL			
6		75%			Loam dark brown.	SM			
8			0/0		Sand grey-brown, fine grained, well sorted, silty with orange mottling. Trace of roots. Saturated @ 4.7'.	SM			
					Sand grey, medium grained, well sorted with silt. Saturated.	SM			
					Clay grey, stiff.	CL			
					No recovery.				
					End of boring.				

Log of Boring SP32

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/6/96</i>	Date Completed: <i>9/6/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

[illegible]

Log of Boring SP33

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/13/96</i>	Date Completed: <i>9/13/96</i>	Total Depth Drilled (ft.): <i>4</i>
Apparent Depth to Saturation While Drilling (ft. bgl):		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-4</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP33

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Asphalt				
					Sand light grey, coarse grained with some clay, trace gravel.	SC			
					Sand dark gray, fine grained with some clay.	SC			
					Sand orange-brown, fine grained, poorly sorted, with limonite staining. SAMPLE TAKEN.	SP			
					No recovery				
					End of boring.				

Log of Boring SP34

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/13/96</i>	Date Completed: <i>9/13/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7

Log of Boring SP34

Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay brown and fine grained sand with some gravel.	CL			
2		90%			Sand orange-brown, fine grained, well sorted, silty. Moist @3.5"	SM			
4					No recovery.				
					Sand orange-brown, limonite stained, fine grained, well sorted, silty. Moist. SAMPLE TAKEN.	SM			
					Sand green-brown as above. Saturated.	SM			
6		100%			Sand brown-grey and grey, fine grained, well sorted with silt. Saturated.	SM			
8					Clay grey-brown, stiff.	CL			
					End of boring.				

Log of Boring SP35

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010






Client: <i>BASF</i>		
Drilling Company: <i>Environemntal Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>		Drilling Method: <i>Hydraulic Hammer</i>
Soil Sampling Device: <i>4' Lined Steel Sampler</i>		Borehole Diameter (In.): <i>2"</i>
Date Started: <i>9/13/96</i>	Date Completed: <i>9/13/96</i>	Total Depth Drilled (ft.): <i>8</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>4.5</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-8</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

Explanation & Comments

BASF Wyandotte AOC7					Log of Boring SP35				
Depth (feet bgl)	Blow Counts	Sample Recovery (%)	PID or FID (ppm)		Soil/Rock Description and Comments	USCS Classification	Lithologic Log	Borehole Completion	Elevation (ft.)
			Values	Profile					
0					Clay dark brown with some gravel.	CL			
-2		95%			Slag Gravel black, some coarse sand, and clay. SAMPLE TAKEN.	GC			
-4					Sand brown , fine grained, well sorted, silty. Moist @ 4'	SM			
					Sand orange-brown, fine grained, well sorted, silty. Trace of clay. Saturated @ 4.5'.	SM			
-6		80%			Sand brown-grey as above. Saturated.	SM			
-8					No recovery.				
-10					End of boring.				
-12									
-14									
-16									
-18									
-20									

Log of Boring SP36

BASF Wyandotte AOC7
1609 Biddle, Wyandotte, Michigan
Project Number: 4695-010

Client: <i>BASF</i>		
Drilling Company: <i>Environmental Science and Engineering, Inc.</i>		
Drilling Rig: <i>Keck (TM) Soil Punch</i>	Drilling Method: <i>Hydraulic Hammer</i>	
Soil Sampling Device: <i>4' Lined</i>	<i>Steel Sampler</i>	Borehole Diameter (in.): <i>2"</i>
Date Started: <i>9/13/96</i>	Date Completed: <i>9/13/96</i>	Total Depth Drilled (ft.): <i>12</i>
Apparent Depth to Saturation While Drilling (ft. bgl): <i>6</i>		Ground Elevation (ft.):

Completion Information

Grout Interval (ft. bgl): <i>0-12</i>	Grout Type: <i>Bentonite chips</i>
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NO WELL INSTALLED

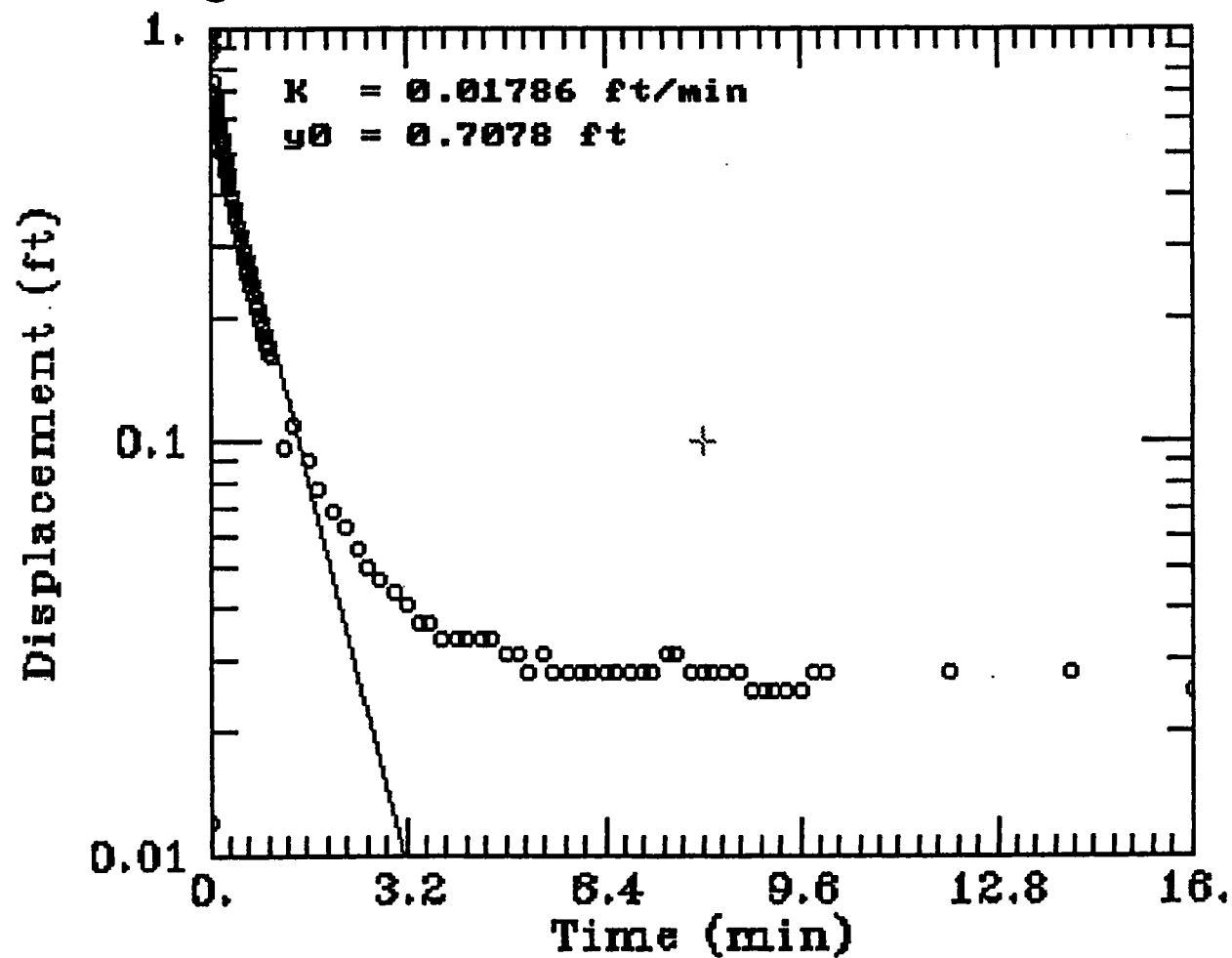
Explanation & Comments

[illegible]

APPENDIX C

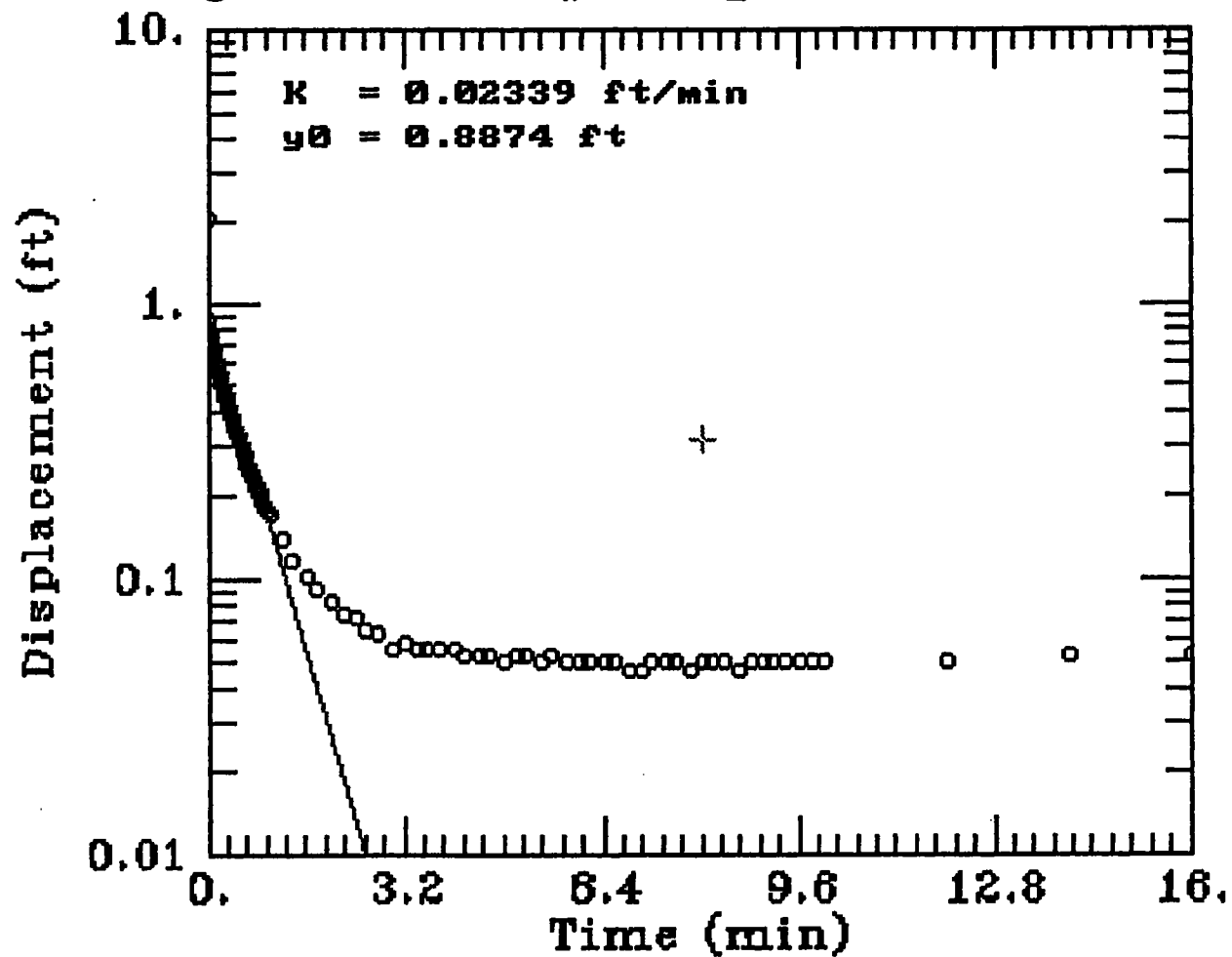
Aquifer Testing Data and Analyses

Figure C-1: RFIMW#9 Slug In Test



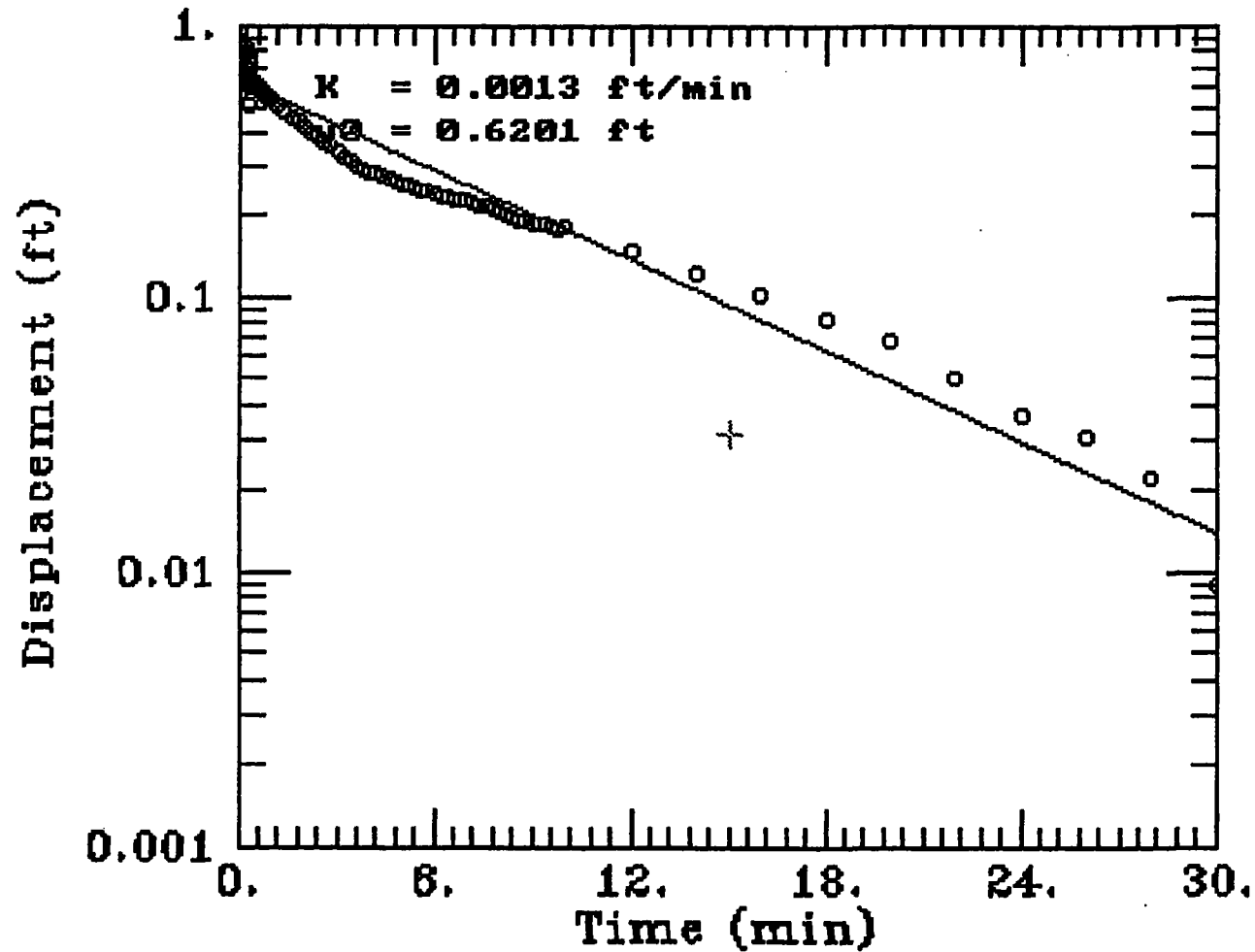
Bouwer-Rice
Unconfined
stest.aqt
Step size: 1
Percent: 1.0

Figure C-2: RFIMW#9 Slug Out Test



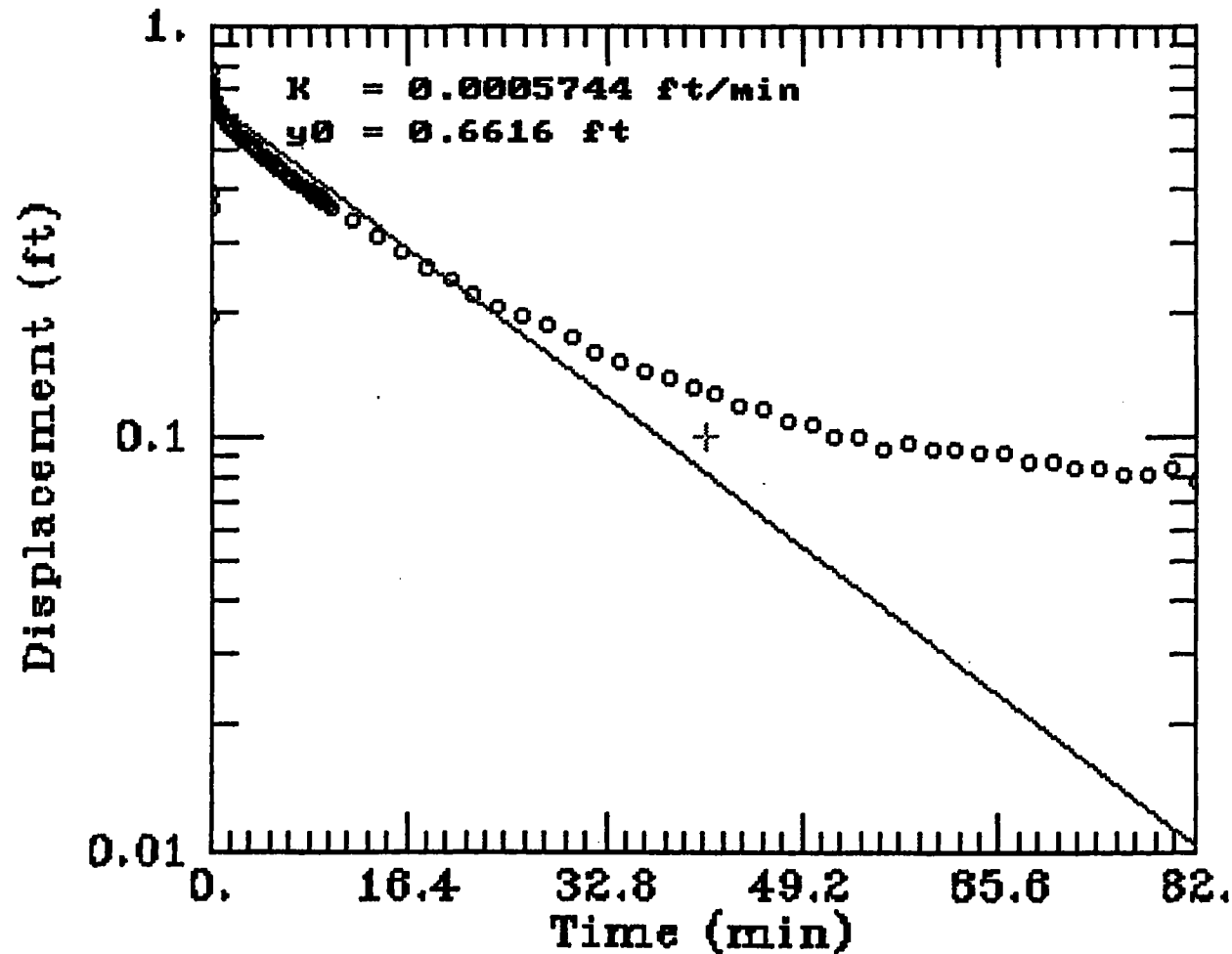
Bouwer-Rice
Unconfined
stest2.aqt
Step size: 1
Percent: 1.0

Figure C-3: RFIMW#19 Slug In Test



Bouwer-Rice
Unconfined
stest3.aqt
Step size: 1
Percent: 1.0

Figure C-4: RFIMW#19 Slug Out Test



Bouwer-Rice
Unconfined
stest4.aqt
Step size: 1
Percent: 1.0

Figure C-5: Difference in Potentiometric Surfaces Between July 14 and July 19, 1997

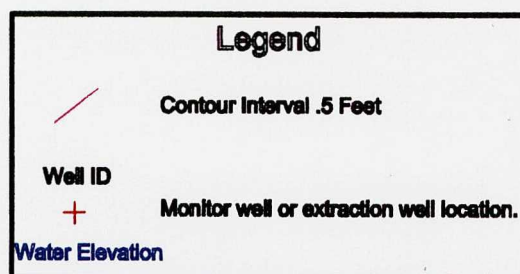
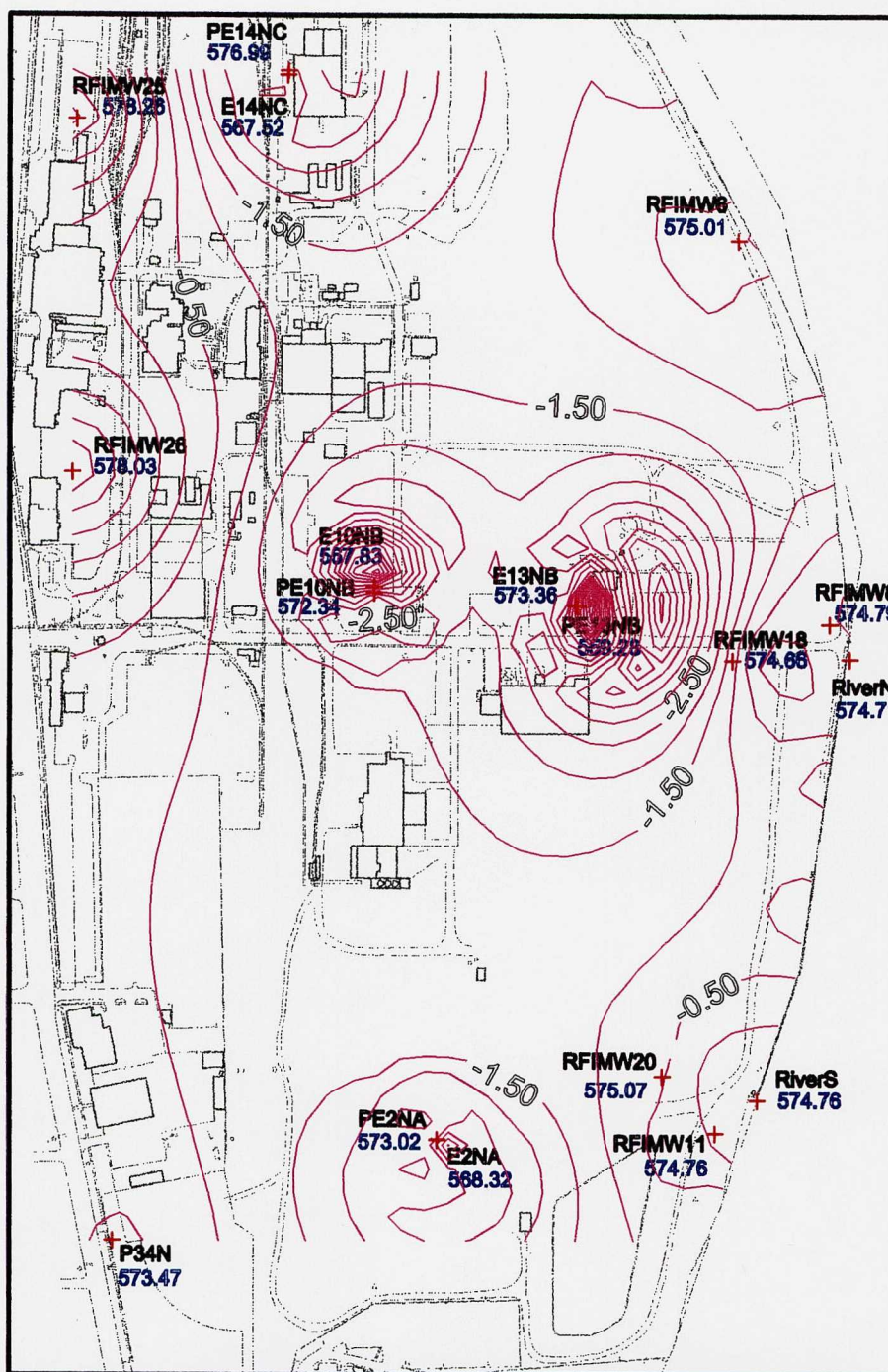


Figure C-6: Difference in Potentiometric Surfaces Between July 19 and July 21, 1997

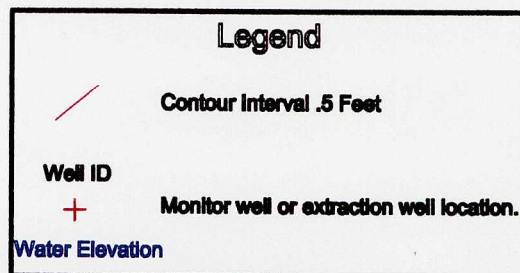
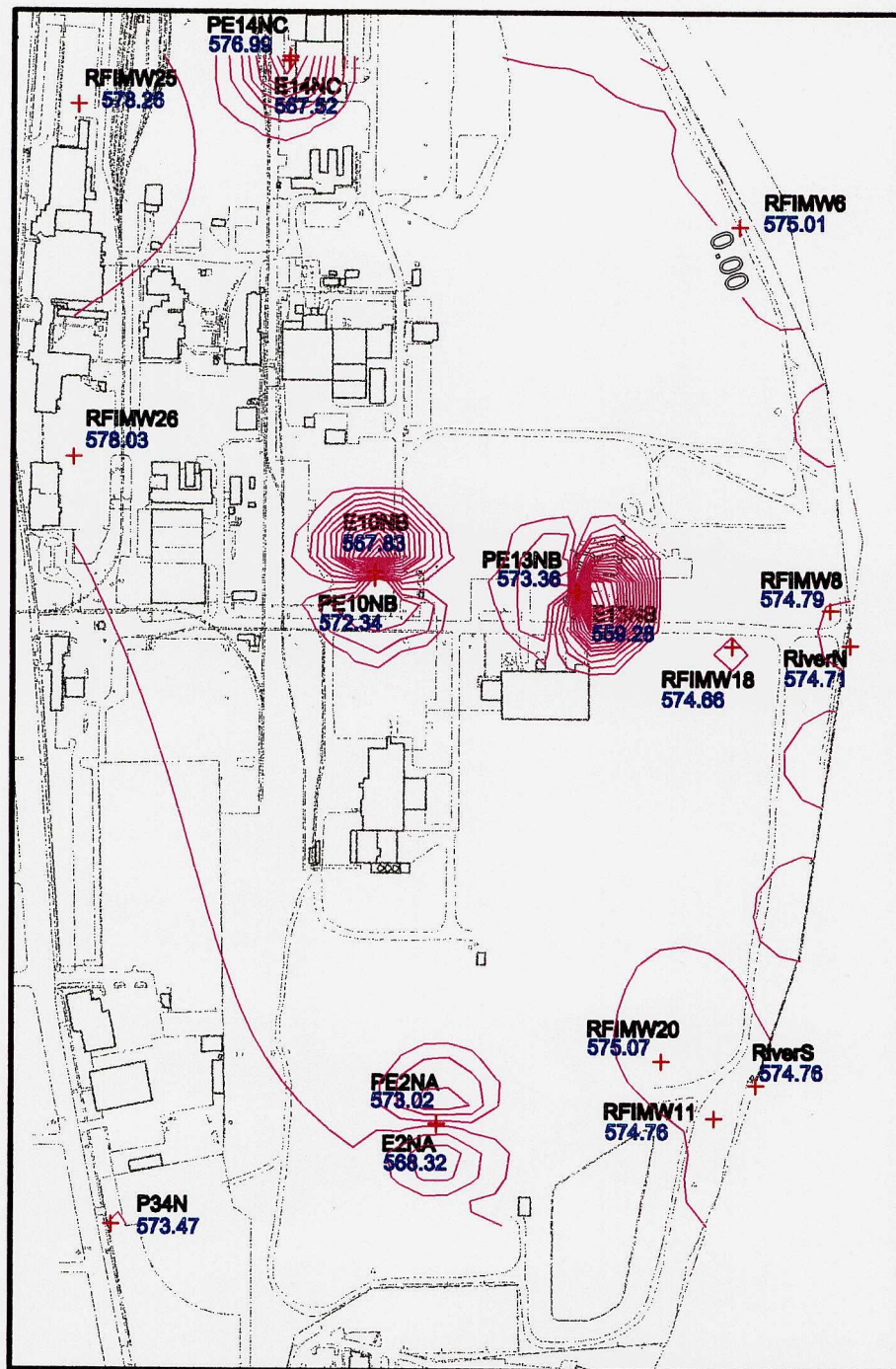


Figure C-7: Difference in Potentiometric Surfaces Between July 21 and July 22, 1997

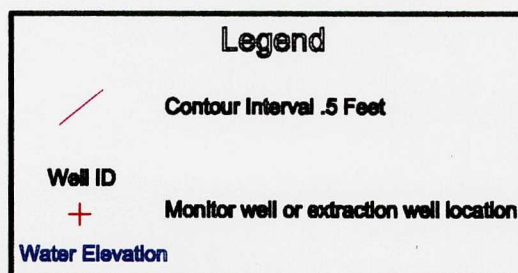
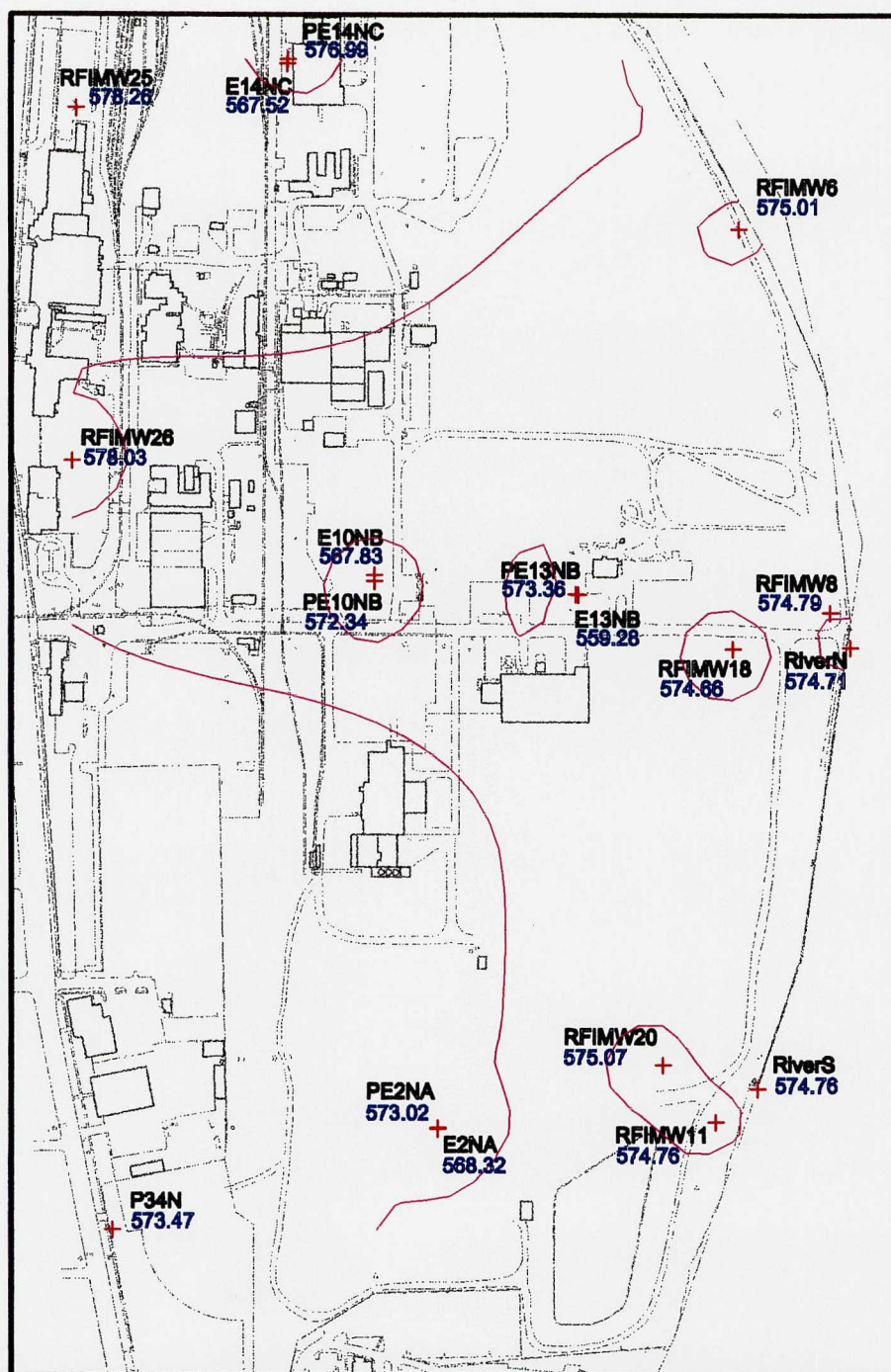


Figure C-8: Difference in Potentiometric Surfaces Between August 6 and August 8, 1997

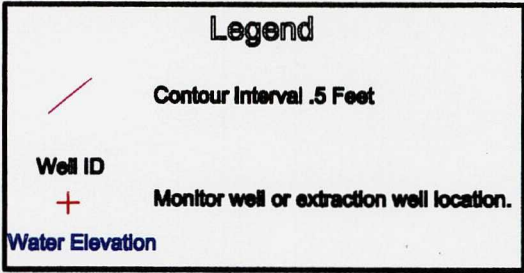
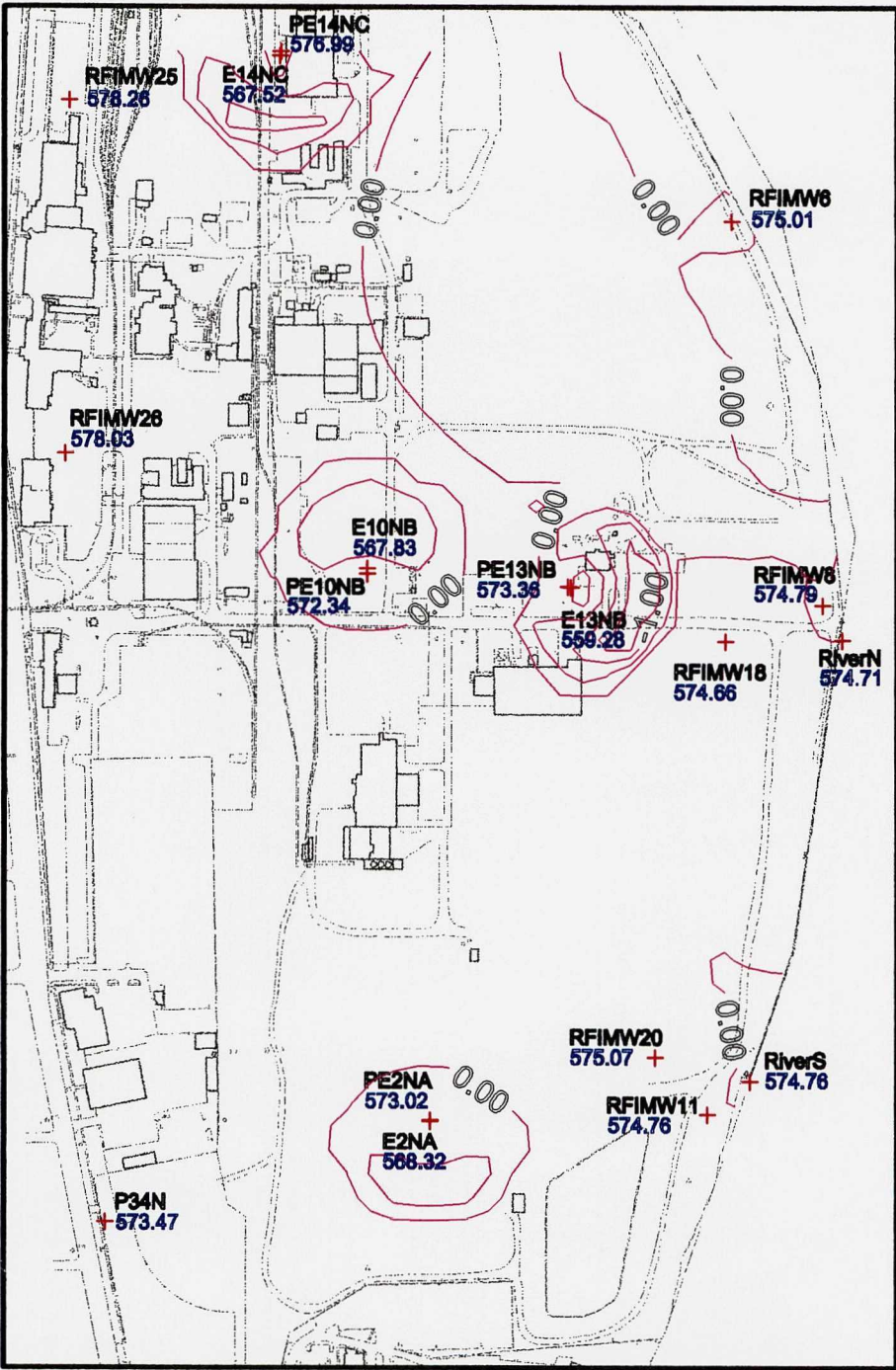


Figure C-9: Difference in Potentiometric Surfaces Between August 8 and August 10, 1997

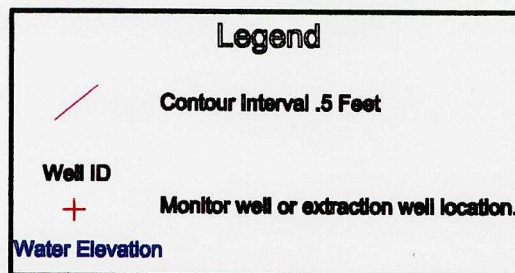
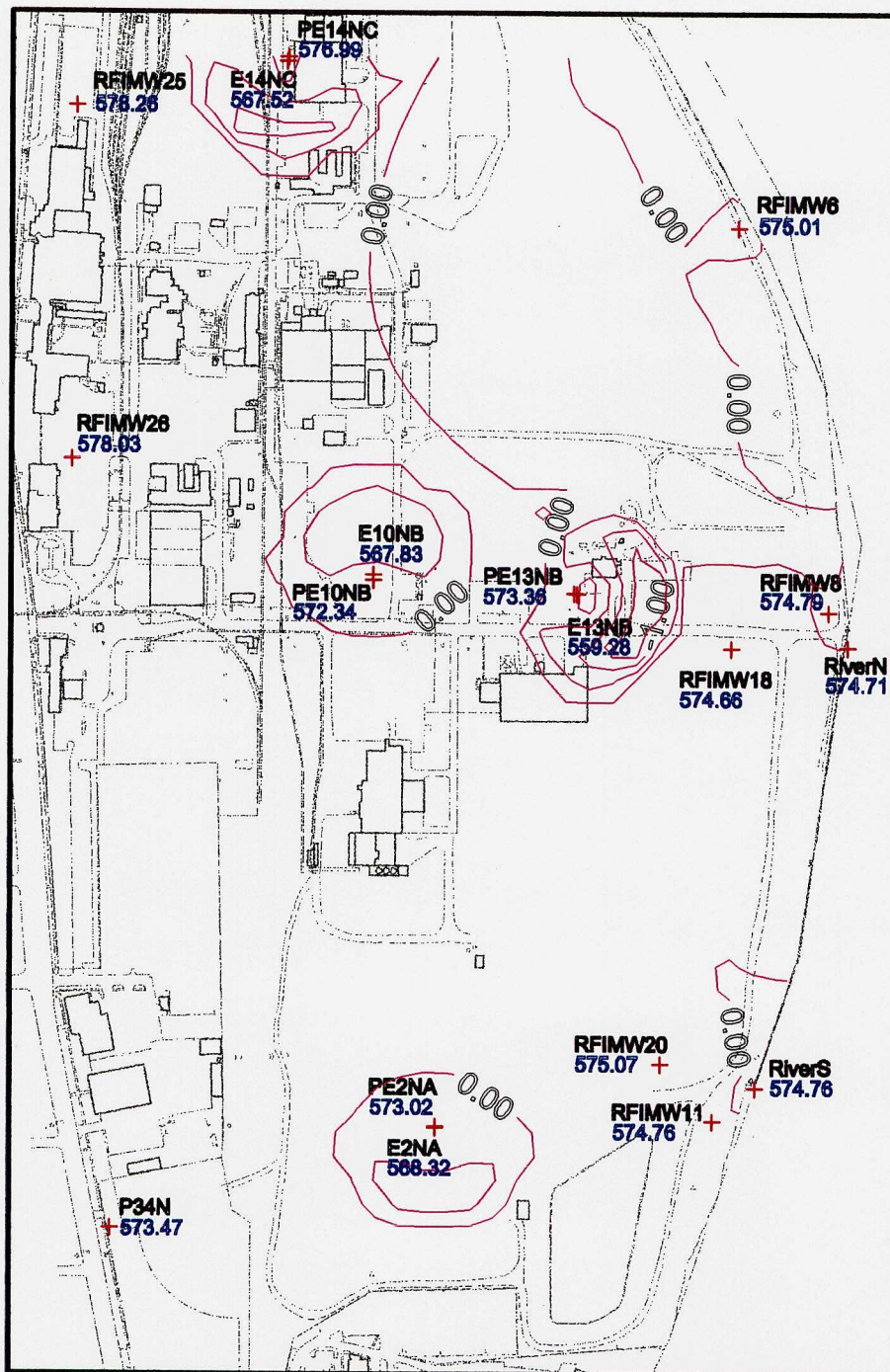


Figure C-10: Potentiometric Surfaces for August 10, 1997
(Recovery System Operational)

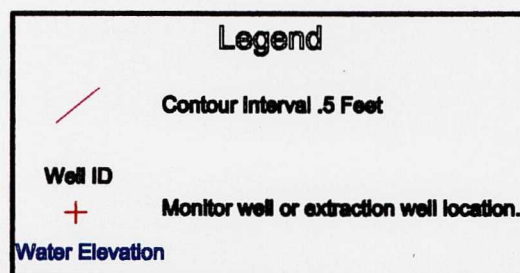
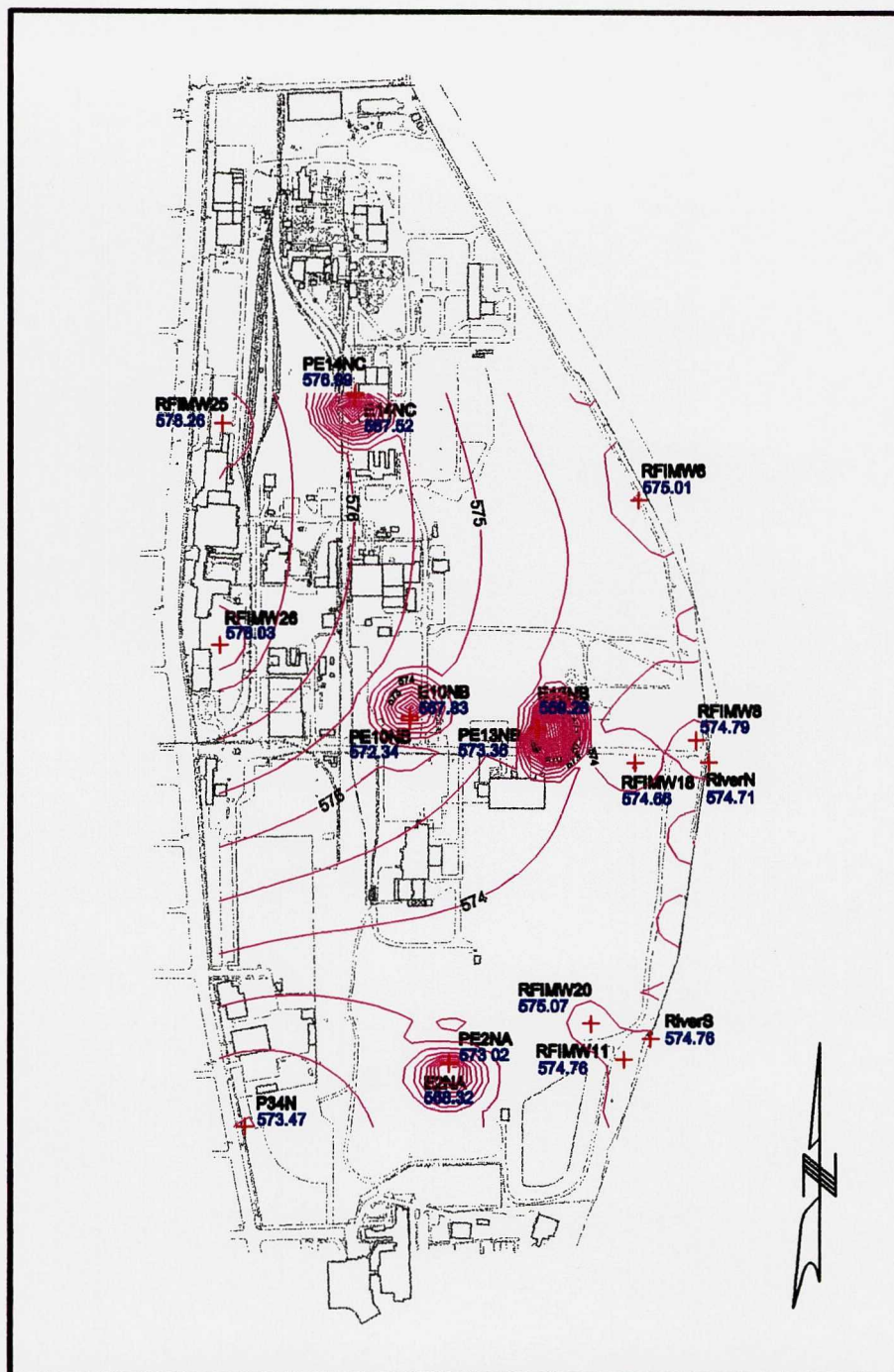


Table C-1: Step-Drawdown Test Analysis for E14NC				
Project Name: BASF/Wyandotte			Well ID:	E14NC
Project Number: 4695-0010			Depth to Static Water	2.47
Step	Flow Rate Q (gpm)	Depth to Water (ft)	Drawdown s (ft)	Specific Drawdown s/Q (ft/gpm)
0	0.228	7.937	5.47	23.96
1	0.329	12.375	9.91	30.10
2	0.514	18.909	16.44	31.96
Aquifer Loss Coefficient, B=		25.75095513		
Well Loss Coefficient, C=		19.47887237		
BQ = aquifer losses				
CQ^2 = well losses				
Predict Total Drawdown with this equation: $s = BQ + CQ^2$				
Flow Rate Q (gpm)	Aquifer Losses (ft)	Well Losses (ft)	Total Drawdown (ft)	% Drawdown due to Laminar Flow (BQ/BQ+CQ^2)
0.1	2.58	0.19	2.77	93%
0.2	5.15	0.78	5.93	87%
0.25	6.44	1.22	7.66	84%
0.5	12.88	4.87	17.75	73%
0.75	19.31	10.96	30.27	64%
1	25.75	19.48	45.23	57%
1.5	38.63	43.83	82.45	47%
1.75	45.06	59.65	104.72	43%

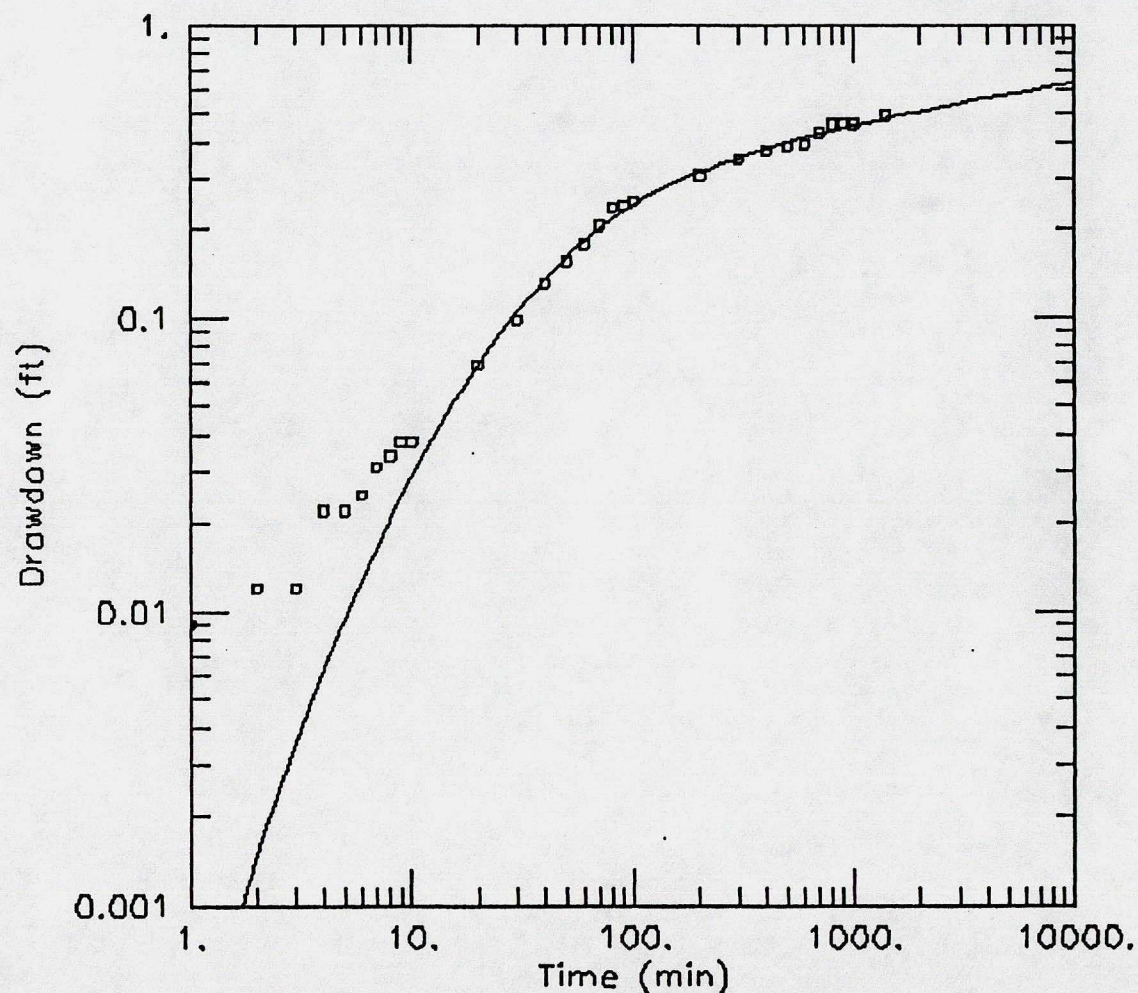
QST Environmental

Client: BASF

Project No: 4695 - 010

Location: Wyandotte

E14



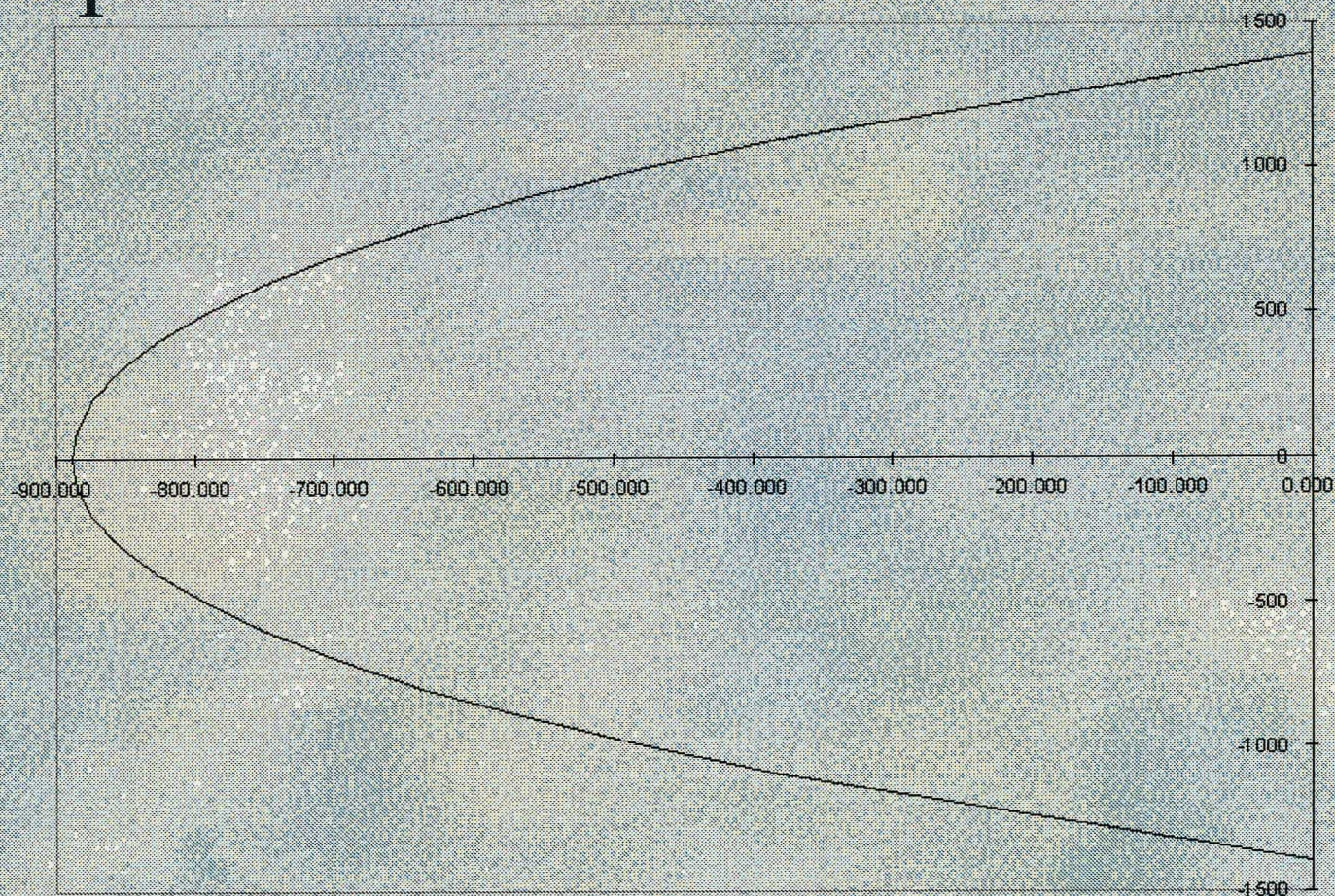
DATA SET:
N14.DAT
10/10/97

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Papadopoulos - Cooper
TEST WELL:
E14

ESTIMATED PARAMETERS:
Q = 0.09369 ft.²/min.
S = 0.002375
s = 0.0005717

TEST DATA:
Q = 0.09 ft³/min.
r = 15 ft.
rc = 0.33 ft.
rw = 0.5 ft.

Capture Zone Model E14NC



C-11: Simulated Groundwater Capture Zones for North Area

Table C-2: Step-Drawdown Test Analysis for E13NB				
Project Name: BASF/Wyandotte			Well ID:	E13NB
Project Number: 4695-0010			Depth to Static Water	3.52
Step	Flow Rate	Depth to Water	Drawdown	Specific Drawdown
	Q		s	s/Q
	(gpm)	(ft)	(ft)	(ft/gpm)
0	0.25	10.532	7.01	28.05
1	0.5	16.711	13.19	26.38
2	0.6	23.046	19.53	32.54
Aquifer Loss Coefficient, B=		9.092307692		
Well Loss Coefficient, C=		24.89957265		
BQ= aquifer losses				
CQ^2 = well losses				
Predict Total Drawdown with this equation: $s = BQ + CQ^2$				
Flow Rate	Aquifer	Well	Total	% Drawdown due to Laminar Flow
Q	Losses	Losses	Drawdown	(BQ/BQ+CQ^2)
(gpm)	(ft)	(ft)	(ft)	
0.1	0.91	0.25	1.16	79%
0.2	1.82	1.00	2.81	65%
0.25	2.27	1.56	3.83	59%
0.5	4.55	6.22	10.77	42%
0.75	6.82	14.01	20.83	33%
1	9.09	24.90	33.99	27%
1.5	13.64	56.02	69.66	20%
1.75	15.91	76.25	92.17	17%

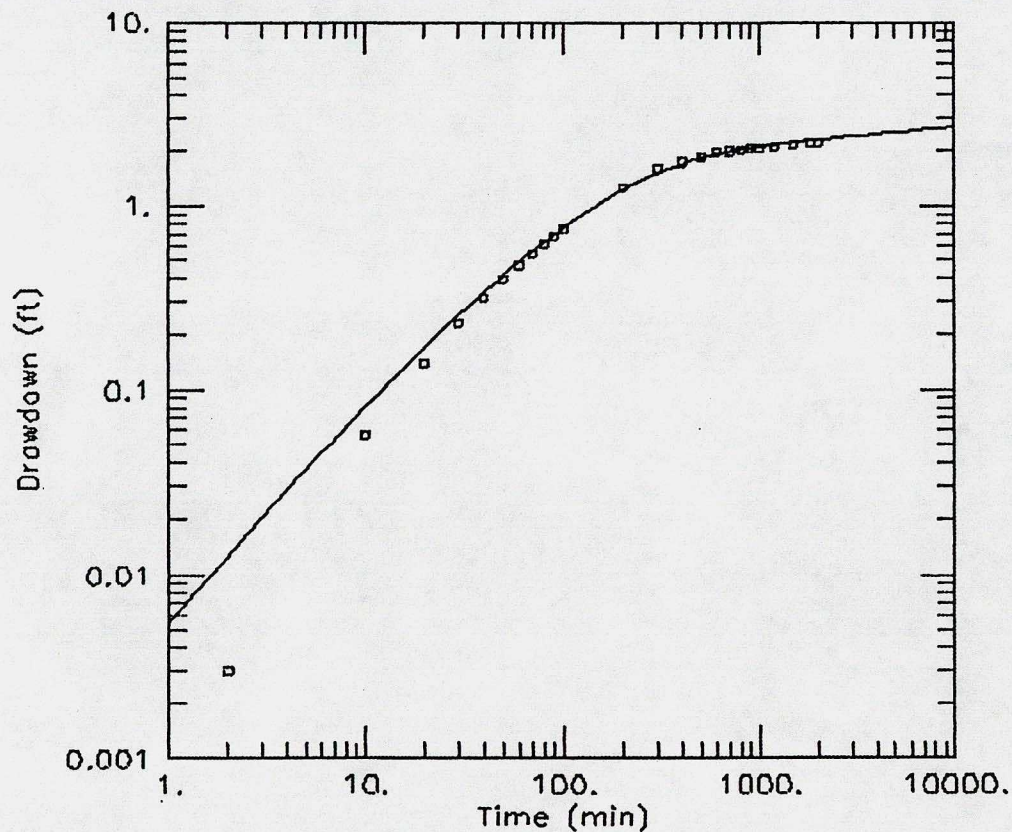
QST Environmental

Client: BASF

Project No. 4695 - 010

Location: Wyandotte

E13



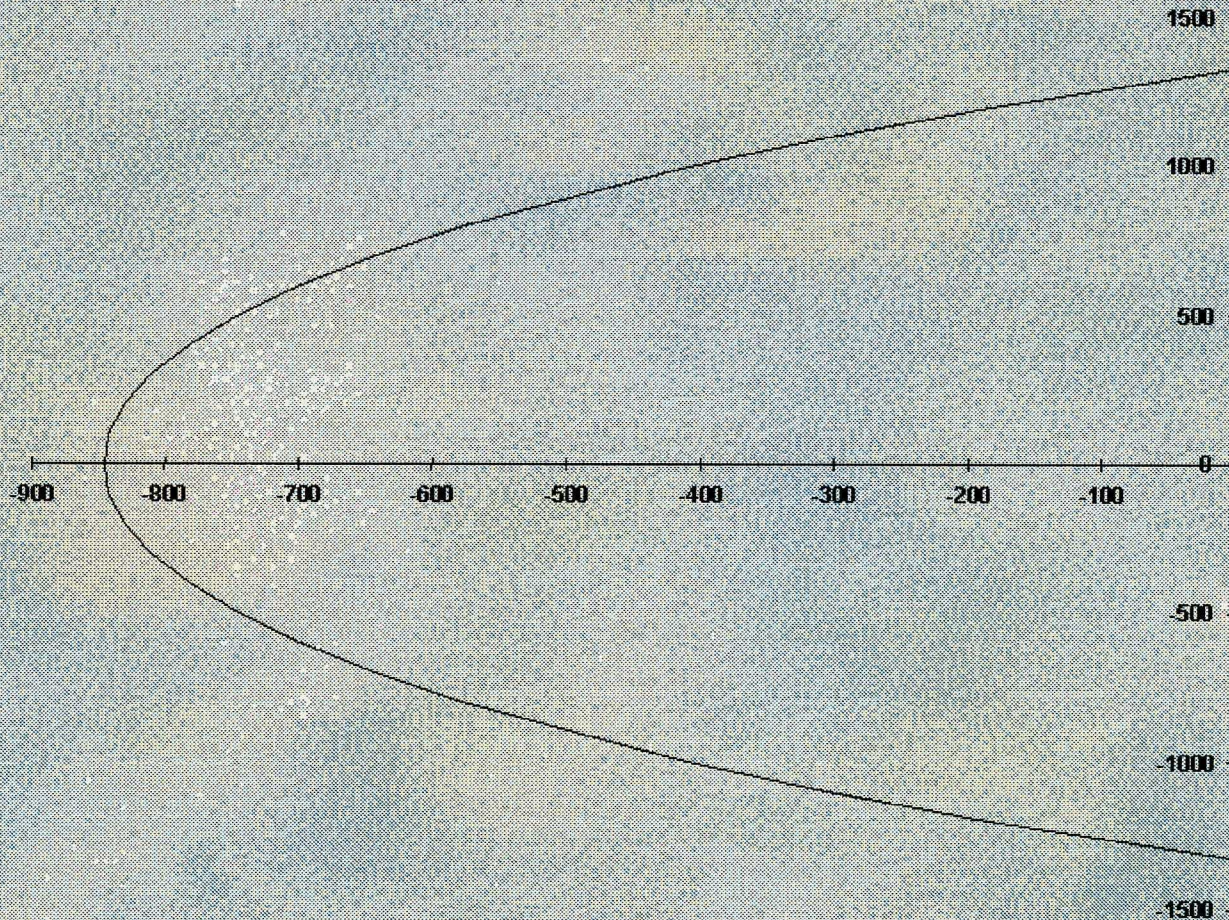
DATA SET:
E13E.DAT
10/10/97

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Papadopoulos - Cooper
TEST WELL:
E13

ESTIMATED PARAMETERS:
T = 0.01981 ft²/min.
S = 8.2114 E-06
s = 2.5087 E-06

TEST DATA:
Q = 0.054 ft³/min.
r = 15 ft.
rc = 0.33 ft.
rw = 0.5 ft.

Capture Zone Model E13NB



C-12: Simulated Groundwater Capture Zones for Southeastern Area

Table C-3: Step-Drawdown Test Analysis for E2NA				
Project Name: BASF/Wyandotte			Well ID:	E2NA
Project Number: 4695-0010			Depth to Static Water	5.72
Step	Flow Rate	Depth to Water	Drawdown	Specific Drawdown
	Q		s	s/Q
	(gpm)	(ft)	(ft)	(ft/gpm)
0	0.219	7.41	1.69	7.72
1	0.440	9.22	3.50	7.96
2	0.820	15.79	10.07	12.28
3	1.590	27.21	21.49	13.52
Aquifer Loss Coefficient, B=		4.534053165		
Well Loss Coefficient, C=		6.889198061		
BQ = aquifer losses				
CQ ² = well losses				
Predict Total Drawdown with this equation: $s = BQ + CQ^2$				
Flow Rate	Aquifer	Well	Total	% Drawdown due to Laminar Flow
Q	Losses	Losses	Drawdown	(BQ/BQ+CQ ²)
(gpm)	(ft)	(ft)	(ft)	
0.1	0.45	0.07	0.52	87%
0.2	0.91	0.28	1.18	77%
0.25	1.13	0.43	1.56	72%
0.5	2.27	1.72	3.99	57%
0.75	3.40	3.88	7.28	47%
1	4.53	6.89	11.42	40%
1.5	6.80	15.50	22.30	30%
1.75	7.93	21.10	29.03	27%

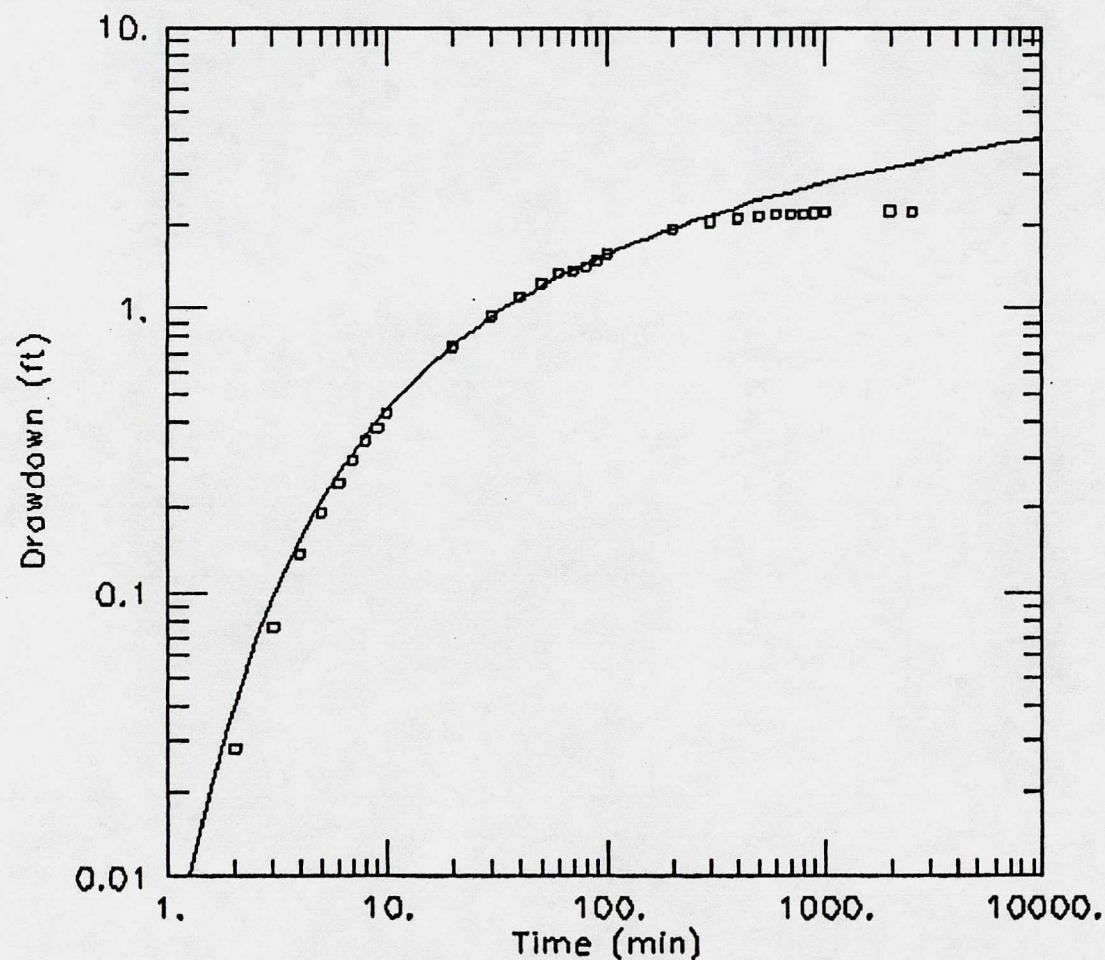
QST Environmental

Client: BASF

Project No. 4695 - 010

Location: Wyandotte

E2



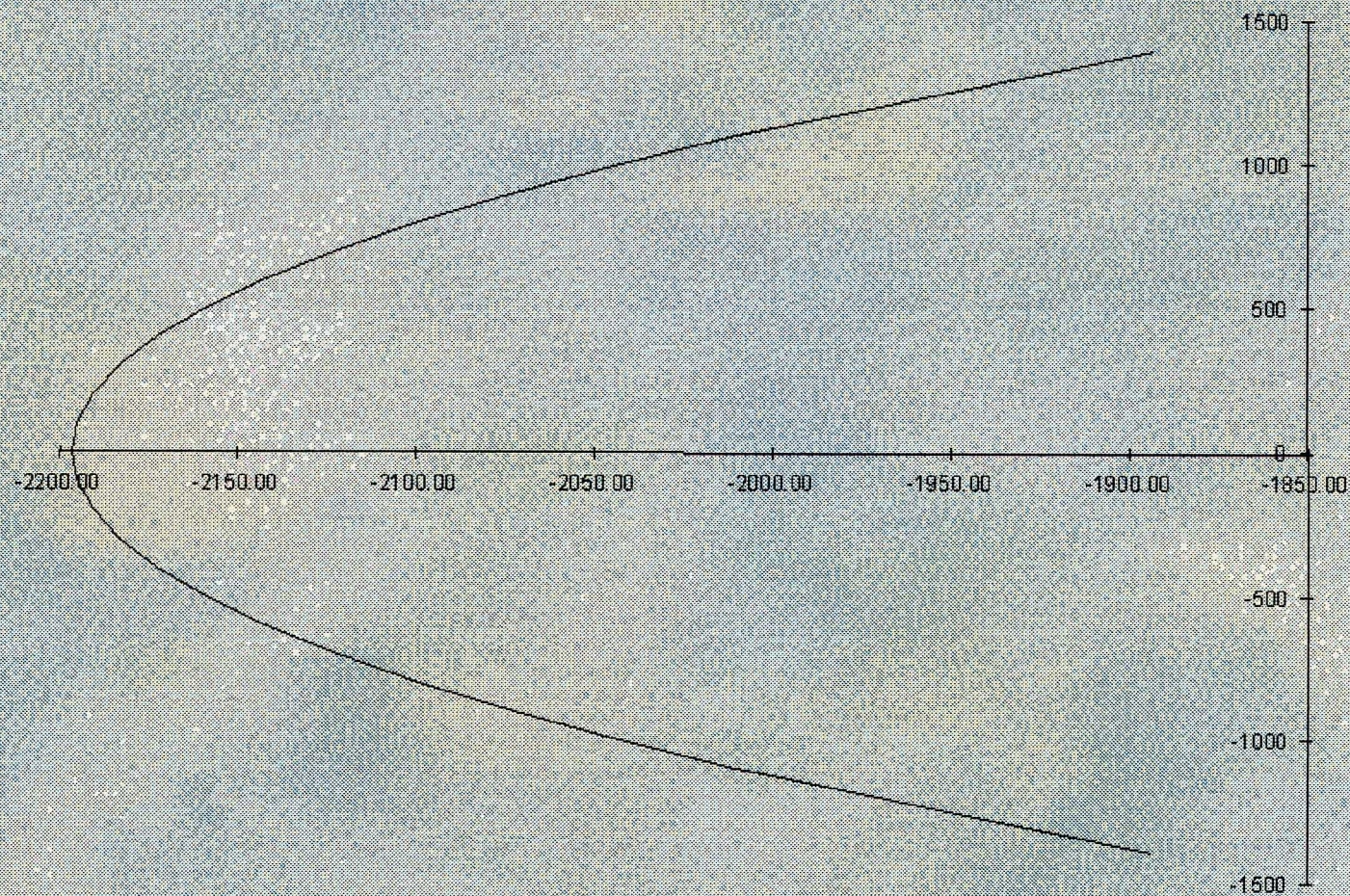
DATA SET:
E2.DAT
10/09/97

AQUIFER TYPE:
Confined
SOLUTION METHOD:
Theis
TEST WELL:
E2

ESTIMATED PARAMETERS:
T = 0.02782 ft.²/min.
S = 0.001689

TEST DATA:
Q = 0.192 ft³/min.
r = 15 ft.
rc = 0.33 ft.
rw = 0.5 ft.

Capture Zone Model E2NA



C-13: Simulated Groundwater Capture Zones for Southwestern Area